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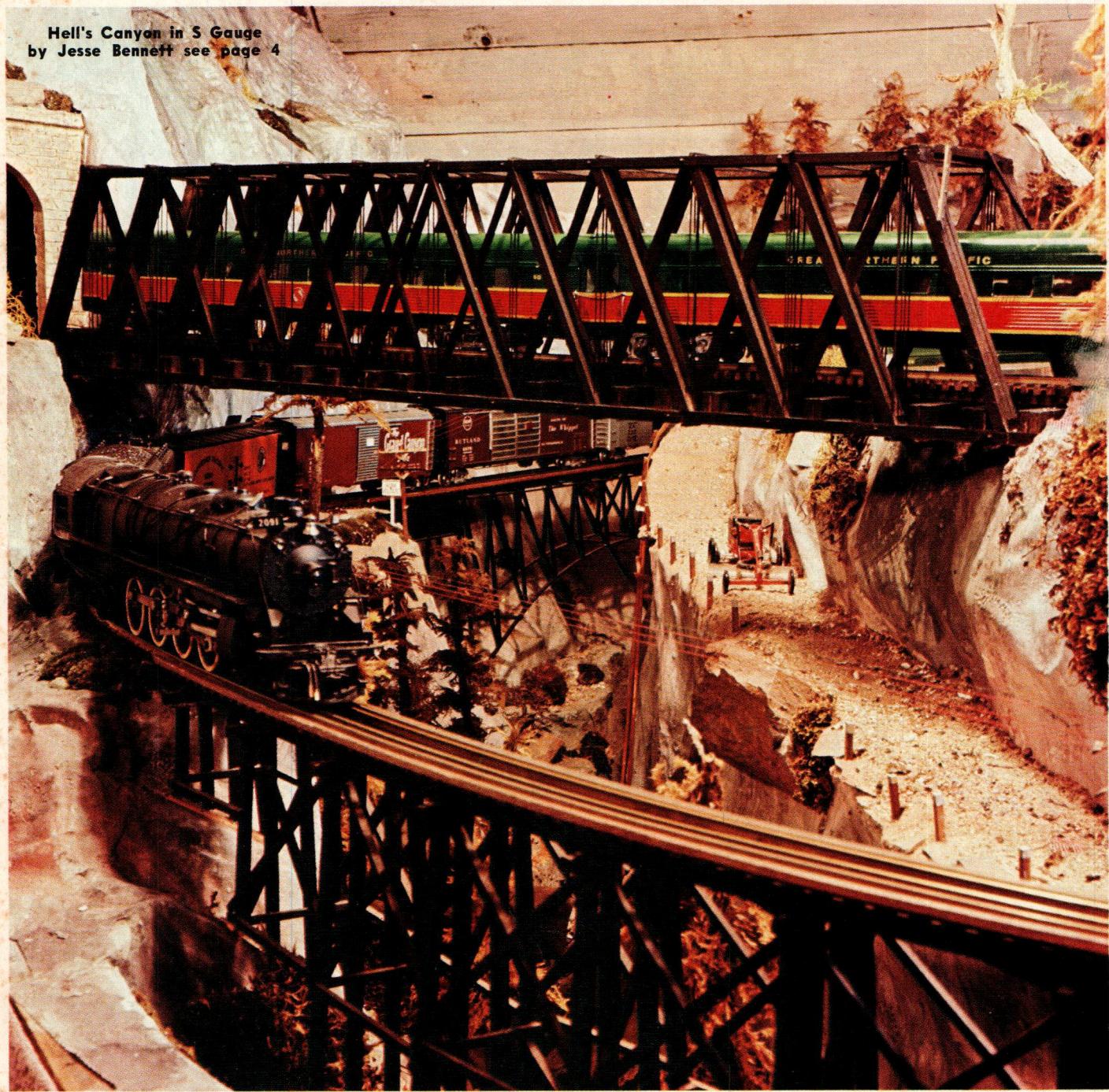
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by Jesse Bennett see page 4



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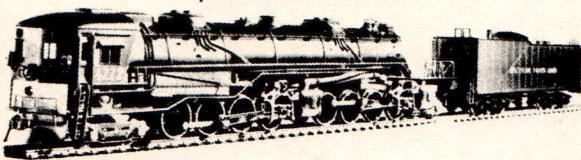
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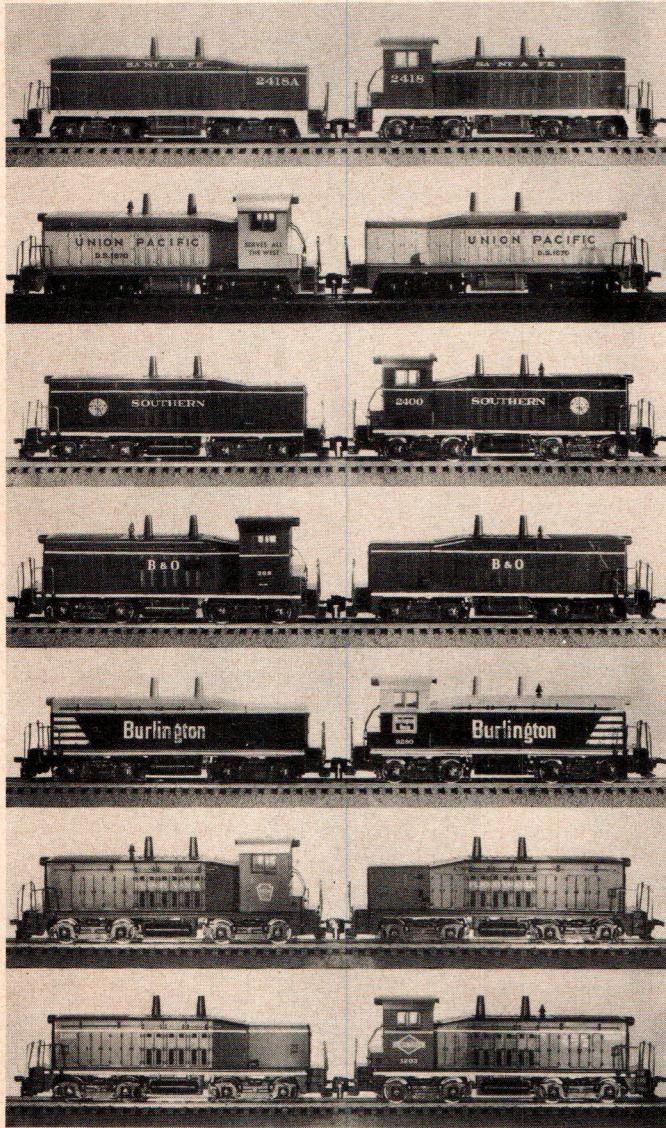
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ATHEARN

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Ray Brown, Jeff Winslow, Mike Pearsall, and Jack Farrell have teamed up on a special presentation of the New York, Ontario & Western's class Y-2 Mountain, which is pretty much the same engine as the New York Central's class L-2C Mohawk. We first ran across Farrell almost a quarter century ago, in our youth, when he was one of the wheels at the Railroad Enthusiasts' New York Division. He thought the O&W was worth preserving on film then, and we're mighty glad he did today. Maybe one of the importers will like this engine, too, in both its versions.

Loco 1, our new diesel book is due out November 1st, a date we're sweating out at the moment. Typesetting is proceeding nicely, most of the pages are pretty well wrapped up, and we're waiting for something to go wrong. We still hope to hit that date, or close to it. We've got a few more diesel plans in this issue, too. Both are Electro-Motive engines. One is an early NW-3 built back in 1939 as Electro-Motive's first real road switcher, although it was essentially an elongated NW-2 switcher mounted on FT trucks, with steam heat added. The second is the modern GP-40, just now being introduced to railroads around the country.

Our Christmas issue is coming up next and we've already amassed a lot of special material for it, along with some extra special goodies we've been holding in reserve. Plans for the Alco H-643 hydraulic drive diesel, for instance, and plans for Erie Railroad No. 10, an early Alco boxcab diesel with innards by Ingersoll-Rand and General-Electric. Quite similar to units which went to the B&O, CRRNJ, and LV.

Photos are always welcome for our Boomer Trail department and we have a special sheet with helpful suggestions which we'll send you upon request, and a stamped addressed envelope will speed it to you. Black and white prints, glossy unmounted are preferred, with sizes between 4x5 and 8x10 preferred. We don't work from color prints. We do use a bit of color on our covers and can use outstanding transparencies showing good layouts and models. Size 2 1/4 x 2 1/4 up to 4x5 are preferred but we can also use critically sharp, well exposed 35mm transparencies.

Hal

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THE COVER

A fast stepping steam powered freight train roars through Hell's Canyon while a Great Northern streamliner takes it easy going over the wood truss bridge above, all on the S scale layout of Jesse Bennett. Star Route, Sandpoint, Idaho. Pike is laid with .126 rail on wood ties. Bennett color photo, from S Gauge Herald.

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SAFETY VALVE



Paul Jansen's Filthy, Dirty Engine

I was enjoying the Sept. RMC fine until I came to page 58 and there was Paul Jansen's MT-4, filthy and dirty looking. What is that machinist doing, salvaging parts off one engine to keep another running? Surely the engine is not live (steamed up) or he'd lose a few eyes. He'd never last long around a railroad.

But what is really bugging me is this weathering stuff. I have watched trains all my life, my father worked for a railroad and I have been an engineer and foreman for 24 years on the Kansas City Terminal Railway. And in all those years I have seen a lot of steam, and it is hard to recall engines looking as filthy as they are when they have been weathered by steam fans. Even when they were being sent to the scrap dealers some never looked that bad.

Some of the old master mechanics would turn over in their graves if their engines showed up looking like the beautiful (?) weathered models. Actually, in my opinion, weathering shows the very last of steam when it was used as stand-by power, just prior to becoming scrap.

You could travel the width of the country and see more well maintained engines than ones which were neglected and dirty. From the SP Daylights to the B&O Pacifics, they were all clean.

When the Katy passenger power arrived at our roundhouse, wipers were employed to wipe the engines

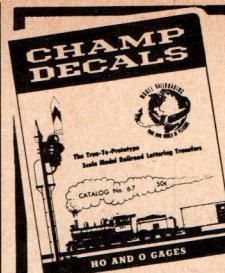
down from the top of the stack to the rail. You could run your hands over the rods and never get dirty. The only oil or grease was on the crosshead guides and on the rod cups. Even the freight and switching power was clean.

The Frisco engines were well kept, polished rods and jackets, with gold lettering and striping. The Wabash blue was not a muddy brown but a beautiful blue. The Southern, was known far and wide for its well maintained green engines.

So if you are going to model steam, do so with the pride of ownership and with the idea of creating a better image in the eye of the public served by your railroad, not an image of bankruptcy or one in which the stingy president is after the Almighty Dollar!

What better sight than the gleaming jacket and tank sides, with rods flashing in the sunlight, pulling a string of well groomed varnish. That was in the days of glory, and not until the last did they start looking like some of those weathered models. Even our switching engines were not as cruddy as some of the models when they were hauled off to the scrap dealer. Dirt and grime wore out moving parts. Keeping engines clean was the reason some lasted fifty years and more.

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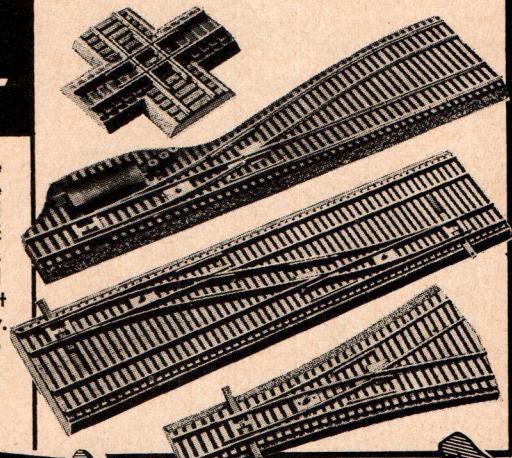
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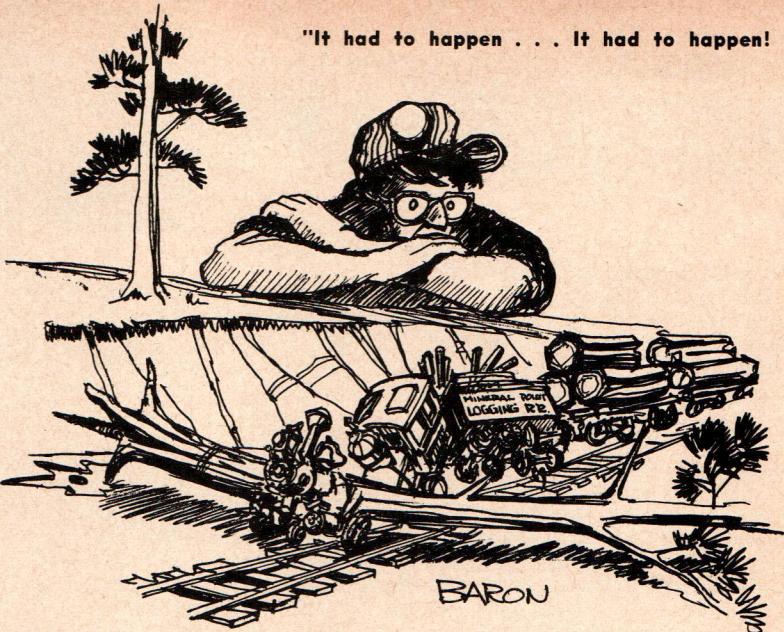
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Interurbans

The article on interurbans by Mischke was good but not entirely correct. The Interstate Public Service 150-157 series combines had a train door on the rear end. All equipment used in service with the 150's had train doors on both ends, including the 300 series trailers, the parlor-diners, and the sleepers.

The diners did not carry a conductor, as he acted as both conductor and dining car steward. I rode the IPS between Louisville and Indianapolis a number of times and I remember the conductor collecting for the meals. This was verified by Mr. Whitesides, a conductor on the IPS who was responsible for the Brotherhood of Railroad Trainmen representing the IPS employees. He was later a motorman on the Indiana Railroad.

Richard Hardin
3841 Peachtree
Louisville, Ky. 40215

We Blokes Have It Easy!

Being a reader for over six years I feel it is time I wrote from this small corner of the world to let you know how much I enjoy your magazine. You know, you blokes have it pretty easy when it comes to model railroading. You have hobby shops, NMRA, scale manufacturers, conventions — the lot. About the only thing we have more of in New Zealand than you is steam locomotives — big ones, I mean. If you can call 3' 6" big!

You don't have trouble getting parts to make up locos, rolling stock, scenery, track, etc. You have large and respected firms like Athearn, Atlas, P.F.M., Tenshodo, Cal-Scale, tru-scale, Ulrich, and a host of others.

Here in New Zealand, model railroading is bigger than you might think. The majority of modelers have commercial sets like Tri-Ang, Marklin, and a few other makes — all classified as toys by the customs dept.

The New Zealand Model Railway Association does, however, intend to do something about this.

There is a lot of scratch building going on and a few pioneers are starting to produce N. Z. Railways kits for rolling stock. We held our first National Model Railway Convention at Easter and it was a howling success. But things in general are tough in New Zealand.

I model in HO and O. I have a large Fleischmann O gauge layout and a small HO Marklin layout. Most of the Fleischmann layout is scratch built.

John R. Houghton
M66 Gladstone Road
Gisborne, New Zealand

Any chance of getting a sample N. Z. car kit, John? Ed.

The Tinplater

For many months now the only articles on toy or tinplate trains are those aimed at the collector. It would appear to the casual reader that ready to run or tinplate equipment is a thing of the past.

Not all electric train fans have the desire or means to go into a scale type operation. I have not graduated into the dubious advantages of kit building, DC power, or a amateur trackwork.

Can we see more articles dealing with combinations of tinplate and scale equipment, which is probably the most common type of railroading going on?

Ronald William
12614 Fairview
Blue Island, Ill. 60406

Removing Those Labels

In answer to Eugene Kressig's query in the June issue of Railroad Model Craftsman regarding the removal of your mailing label from the plastic bag in which you mail your subscription copies, I have an answer.

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Emmett J. Dane
21 Hannum Ave.
Homer, N. Y.

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B. C. Scherzinger
2165 Dana Ave.
Cincinnati, Ohio

Wants A BAR Caboose

I have recently obtained an Electro-Motive BL-2 diesel with Bangor & Arrostock lettering and have been looking for a BAR crummy. Can anyone help me find one?

Steven R. Seidel
1401 W. Hickory St.
Kankakee, Ill. 60901

Why not be old fashioned and build a caboose kit and letter it with BAR decals offered by Champion and Walthers? Steve, incidentally, also sends along a reminder of the Teen

Association of Model Railroading, open to anyone ages 13-19. Further info from David Burris, 2628-10th St., Baker, Oregon 97814. Ed.

NMRA Couplers

I noted a letter somewhere from someone lamenting the inclusion of standard NMRA-type couplers on HO equipment being sold. Is there some other type that is preferable and generally used by modelers? If so, what is its advantage of the NMRA-type?

Robert B. Fisher
505 Front Beach Drive
Ocean Springs, Miss.

39564

This magazine does not recommend any one product over any other product. The NMRA X-2f type coupler is the standard coupler for all ready to run HO train equipment sold in the U.S.A., excepting a few imported lines. Because of this fact, and because the NMRA-type coupler is such a simple device and costs very little when made in quantity thus not affecting the price of kits, it is included in many kits as a convenience to modelers who prefer it, and there are many.

However, a large number of advanced modelers prefer other types of couplers, notably AAR types which must be hand connected in most cases, and the various Kadee couplers. The Kadee popularity is due to its close realism to the prototype, low

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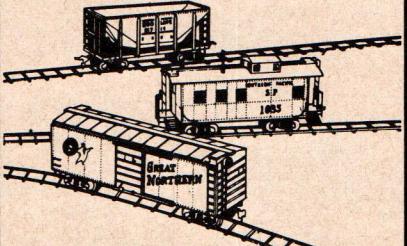
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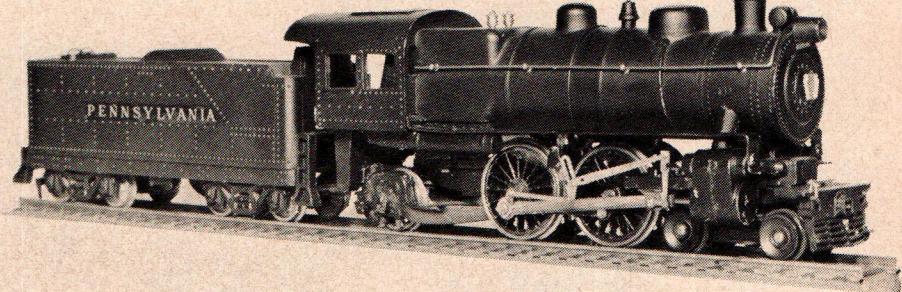
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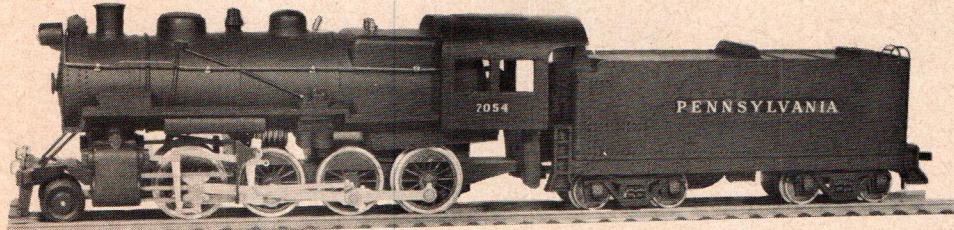
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DISPATCHERS REPORT

K & P Enterprises Co., 5907 West Pico Blvd., Los Angeles 35, Calif., offers small but useful items for the model rail including highly realistic pine trees which don't look like inverted ice cream cones dyed green, and four detailed rocks cast in different useful sizes. And a variety of model railroad forms. Send a stamped addressed envelope for the current price list. The forms include Bad Order Reports, Project Orders, Purchase Orders, and Equipment Inventory cards, and list at 98c per hundred padded, or a pad of all four types at \$2.98.

CRC Chemicals, Limekiln Pike, Dresher, Pa. 19025 has a new aerosol corrosion combatant called CRC 3-36. The manufacturer claims that CRC 3-36 prevents rust and corrosion, displaces and seals out moisture, lubricates, cleans, and penetrates, yet never becomes hard or tacky and does not need to be removed. The CRC 3-36 is inert and non-toxic. RMC is currently testing this new product which is not at present available in hobby shops but might be offered through better hardware stores.

Dome Car

Bill Carvin, editor of the PCR's "Branch Line", sends along a headline from the Phoenix "The Arizona Republic", reproduced on these pages in reduced form. Which prompted Bill to relate about the O gauger who walked into his hobby shop and proclaimed that he was getting out and into HO, perplexing the hobby dealer until the modeler showed the headline and exclaimed, "How can we buck this kind of competition?"

Northwest Short Line, Box 423, Seattle, Wash. 98111, expecting its new Milwaukee Road S-2 4-8-4 in Feb. 1967. NWSL's class Q-6 Northern Pacific 4-6-2 still available at \$54.50 brass unpainted RTR.

Pacific Fast Mail, Box 57, Edmonds, Washington 98020, has just released its Eleventh Catalog, bringing a number of new locos to the line and deleting a few old favorites. Should we mention the new Fujiyama SP M-4 Mogul or the B&O 0-8-0 L-2 or E-27ca 2-8-9? Or Frisco's Russian Decapod from United. (How much of a job to convert that one into an Erie J-2 we ask again?) and the Uintah-Sumpter Valley HOn3 2-6-6-2? And in modern diesels, the GP-35 from Tenshodo and the SD-24, and the V&T Club Car "Julia Bulette" by Fujiyama. There's lots more, including the Crown limited-run Great Northern R-2 2-8-8-2 and the forthcoming Erie S-4 Berkshire (Fujiyama again). The 36 page catalog is yours for only 50c and all

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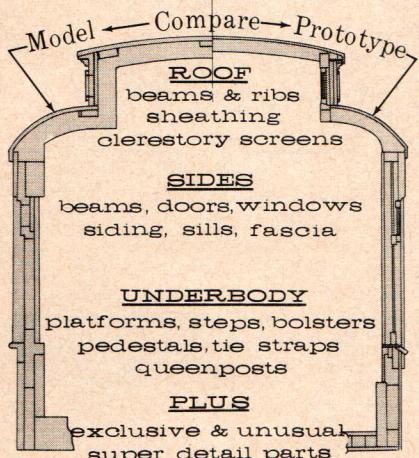
There are a few gifted people in this hobby who are able to produce an unbelievably fine product. Rollin is one of these rare individuals. If you are a perfectionist and want the finest detail (which admittedly costs a little extra) you will appreciate Rollins House Miniatures.



Completely illustrated in Walthers 1966 HO Catalog (\$1.00) or send a stamped envelope for a Rollins House tear sheet.

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Phoenix Weather
Partly cloudy with scattered low cumulus
and rain and winds. Today's high
temp 88°. Yesterday's temperature:
high 88°, low 68°. Wind: N
low 22. Details, Page 12.

THE ARIZONA REPUBLIC

Today's Chuckle
The trouble with America's foreign
relations is that as many of them are
border.

77th Year, No. 87 TELEPHONE: 211-6888

Phoenix, Arizona, Friday, August 12, 1966

80 e Ten Cents

In North Viet Tasks

50,000 CHINESE HELPING HO

Headline from August 12, 1966 issue of Phoenix' "Arizona Republic" brings to mind the good old days when HO was also referred to as a breakfast cereal by the O gaugers. But how can they buck this?

photos excepting the cover silhouette are in full color. This catalog is a must for all serious HOers.

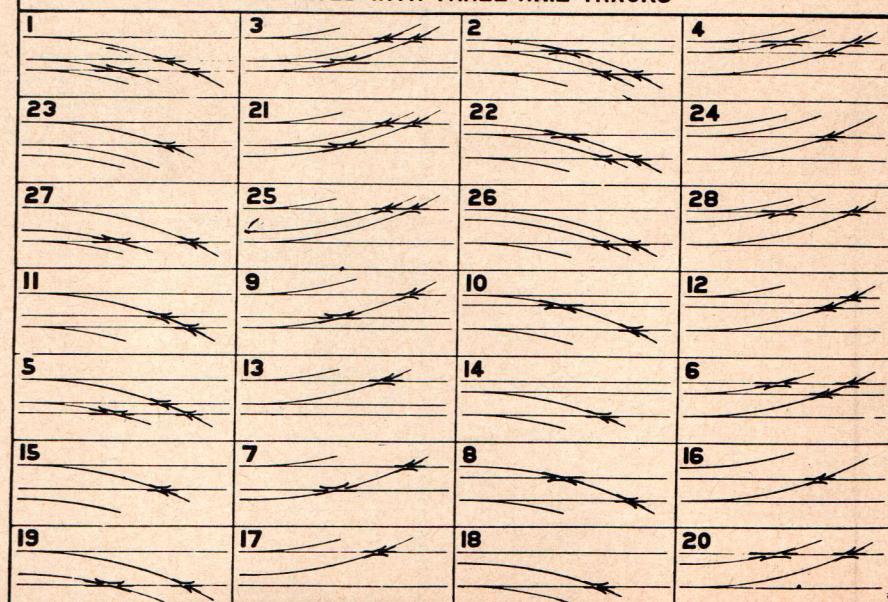
Edwin P. Alexander, Upper River Road, Yardley, Pa. advises that only the toy train collection has been sold, with a large scale and semi-scale collection of quarter inch (O) equipment totalling 70 locos and 300 cars and a large Ives O gauge collection still intact. However, the museum is only open weekends and it is advisable to arrange an appointment beforehand. A stamped addressed envelope brings Ed's list of loco and car plans, Pennsy photographs, and scale model (1/4") fork lift trucks.

William K. Walthers, 1025 N. Water St., Milwaukee, Wisconsin 53202, for model railroaders. PLD-4 Prototype Lettering Diagrams supplements the earlier books with more car and loco diagrams, and is strong on newer type cars and locos. Lists at \$3.00, 80 pgs, spiral bound, 5 1/2 x 8". The second title is the Railroad Paint Index and Color Mixing Guide, 24 pages, 5 1/2 x 8", saddle stitched. A limited edition volume of 2000 copies, each one numbered. Specific paint colors for 86 railroads are included, along with suggestions for mixing Floquil paints to achieve the

exact shade required. For example, eight different shades of yellow are listed, along with eight reds, seven oranges, nine greys, thirteen greens, seven blues, and four browns. That the color mixing can be complex is seen in the formula for the Yellow, designed as Y-7: 2 parts No. 31 reefer yellow, 16 parts No. 11 white, 2 parts No. 30 reefer orange, and 1 part No. 41 light green. This color is used on certain Texas & Pacific equipment. Gathering the data for the many different formulas necessitated the hiring of an artist trained in color matching and required three years of intensive research. Paint chips and other data were used in the compilation and a number of false starts were caused by color transparencies badly off color. At \$3.00, a fair price for what could be a most valuable reference.

Sattler's HO Depot, 1510 Cedar Ave., Cincinnati, Ohio 45224, has made a chart showing some 28 different turnout possibilities involved with dual gauge trackage having three rails, which we reproduce on these pages in reduced size because of its special interest to all narrow gauge fans. Any of these switch types are available

DIAGRAMS SHOWING THE 28 POSSIBLE TURNOUT CONDITIONS INVOLVED WITH THREE-RAIL TRACKS



from Sattler's, custom built to your specifications. Descriptive literature of the entire Sattler custom switch line in either code 70 or 100 is available for a stamped addressed envelope and make it a big No. 10 size. Sattler, incidentally, had to up their prices 20% effective Sept. 1, 1966, because of rising raw material and overhead costs.

Trolley Talk Vol. 2, containing issues 21 through 40, of Rich Wagner's popular trolley modeler's journal, has just been issued as a bound volume, saddle stitched, 8½ x 11, 136 slick pages, \$6.00. Published by Wagner Car Company, 59 Euclid Avenue, Wyoming, Cincinnati, Ohio 45215.

Northwest Short Line, Box 423, Seattle, Wash. 98111, offers several data sheets covering various of their HO imported brass locomotives free to any modeler sending in a stamped addressed envelope, large size preferred.

Central Locomotive Works, 2705 Honey Road, Lake Park, Florida 33403, clearing out their Southern P-s4 Pacific kits which are loaded with lost wax fittings and parts. Kit lists at \$175 complete and is available in budget priced sections. Also going fast is the Alco 2000 hp. passenger diesel used on railroads from coast to coast for many crack trains. Available in both A and B sections. Dual powered A unit kits lists at \$126.00. A large stamped addressed envelope brings full information on these locos, as well as other Central Locomotive Works loco kits, power trucks, and automatic couplers for O scale.

Another HO cow and calf is coming, this time in all brass Japanese import, model TR-6 1600 hp., from Trains, Inc., 5710½ W. Diversey, Chicago, Ill., with power to all eight axles. Model will have satin finish and is equipped with separate brake shoes and hangers. A&B combination, \$54.95. Powered A loco, \$29.95. Powered B cabless unit, \$27.95. An HO General Electric U-50 is also due from Trains Inc. in December, in brass at \$49.95. This 5000 hp. monster measures 80 scale feet in length. Also coming up are more brass cabooses: Santa Fe wood off-center cupola, Great Northern wood off center cupola, Espee ACF bay window 1937 type, and a big Electro-Motive E-9 A unit.

Some new TT items from Gamco Products, 2027 Chambers Drive, N. E., Huntsville, Alabama 35811. Included are TT people from Preiser and Merten (Germany), and an 0-8-0 side tank team loco by Zeuke, of Berlin, Germany. Printed literature is available for a large stamped addressed envelope. Test Track reviews on these new items are coming up.

Cinders & Smoke, by Doris Osterwald, published by Western Guideways, Inc., Denver, Colorado, is another book on the D&RGW, covering the line from Durango to Silverton. This one is somewhat different, giv-

ing information on the geology and history of the area, the foliage to be seen, and the equipment to be ridden. Included are many rare old views and some new ones. This 96 page book at \$2.25 postpaid should be especially sought by modelers looking for accuracy in their scenic rendering. Available from RMC's Reader Service, 6 East Main St., Ramsey, N. J. 07446.

Champion Decal Company has raised the price of its Freight Car Lettering Plan Book No. 2 to \$3.75. This one, previously reviewed in RMC, is a gem, beautifully printed, and a most valuable reference for any modeler.

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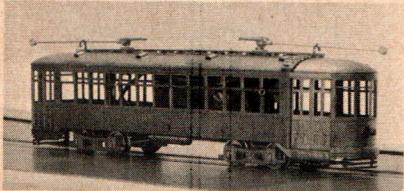
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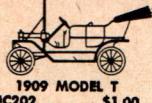
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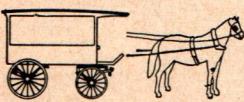
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Club Shows

WESTFIELD, N. J. Nov. 18, 19, 20, 25, 26, 27, Dec. 2, 3, 4. Central Jersey Model Assoc. Annual Exhibit, 185 Elm St. O Gauge RR, Trolley & Interurban. Hours: Fri. 7-9 PM; Sat. 2-5 PM, 7-9 PM; Sun. 2-5 PM. Adm. Children 25¢, Adults 50¢.

AUBURN, N. Y. Nov. 19, 20. Cayuga Valley Model RR Club Annual Open House, Cayuga County Museum Annex, Genesee St. 2-5 PM. Adm. Donations accepted. Info. contact Jean Houde, 40 Linn Ave., Auburn, N. Y. 13021.

MURRAY HILL, N. J. Nov. 23. Organizational meeting, 94 Oakwood Dr., Murray Hill at 8 PM. All tractions fans interested in completing construction & operating existing large HO traction line welcome. Info. contact Charles F. Gerow, 263 Clark Ave., Staten Island, N.Y. 10306.

MURRAY HILL, N. J. Nov. 19. Garden State Div. NER, NMRA Meet, Summit-New Providence HO RR Club, Inc., 94 Oakwood Dr., Murray Hill, at 1 p.m. Clinic, followed by session on club layout. Reg. fee \$1.00. Pre-meet luncheon, 11:30 AM, Snuffy's, Scotch Plains. Info. from Bob Escoffier, 312 Gallovia, Westfield. 232-7535.

ELGIN, ILL. Nov. 18, 19, 20. Valley Model RR Annual Open House, south on Illinois Rte. 25 to Kenyon Rd. HO & HO₃ oper. layout, refreshments, displays. Adm. free, donation bowl. Hours: 7-10 PM, Sat. & Sun. 2-10 PM. Contact Ken Priest, 503 Park Blvd., Streamwood, Ill. 60103. Phone: 837-8457.

PORLAND, ORE. Nov. 12, 13, 19, 20. Columbia Gorge Model RR Club Annual Show, 3405 North Montana Ave., HO Ga. Columbia Gorge Lines in full op. 1-8 PM each day. Adm. Adults 50¢; Children under 12-25¢. Info. write Charles Storz, Jr. at club address.

CAMDEN, N. J. Nov. 25, 26, Dec. 2, 3, 9, 10. Silver Valley RR Club Annual Show, Central Branch YMCA, 614 Federal St., Camden, HO, HO₃ layout. Hours: Fri. 7:30-10:00 PM; Sat. 12 Noon-5 PM. Contact Charles Carangi c/o Club.

NEW HAVEN, CONN. Nov. 4, 6, 11, 13, 18, 20. New Haven Society of Model Engineers Fall Show, 90 Court St. Hours: Fri. 7:30-10:00 PM; Sun. 2:30-5:30 PM. Fare: Adults 50 cents, Children 40 cents.

LONG ISLAND CITY, N.Y. Nov. 4. Empire Model RR Assn. Annual Auction, Basement 34-05 44th St., at 7 PM. Bring your HO equip. or RR books to sell, trade or auction, free of charge. Contact Hal Fletcher, 42-64 65th Pl., Woodside, N. Y. 11377. Phone: (212) IL 7-6236.

LOS ANGELES, CALIF. Nov. 12. Los Angeles Div., PCR-NMRA annual layout tour, starting at Pioneer Western Club, 7426 Orange-thorpe, (rear), Buena Park, Calif., at 10 AM. Features club & private layouts. Info. contact R. J. Jefferys—776-3411.

WILLISTON PARK, L.I., N.Y. Dec. 9, 10, 11. Nassau Model RR Club Christmas Show, 174 Hillside Ave. Hours: Fri. 8-10:30 PM; Sat. 2-4:30 PM, 8-10:30 PM; Sun. 2-5 PM. Info. contact George Hatfield, Jr., 143 Laurel Dr., New Hyde Park, L. I., N. Y.

MERCHANTVILLE, N. J. Nov. 4, 5, 11, 12. Cherry Valley Model RR Club Annual Show, basement of Grace Ep. Church, cor. Maple Ave. & Centre St., 1-9 PM. Op. O ga., 1/4 scale, 2 rail. Adm.—donation.

CHATHAM, N. Y. Nov. 20. Harlem Valley RR Club big Model Show, Chatham Bowl Rte. 66, at 3 PM. All ga., movies, visits to local layouts. Info. contact Richard Luckin, 44 Kinderhook St., Chatham, N. Y. (518) CH 2-3089.

BROOKLYN, N. Y. Oct. 21, 22, 23, 28, 29, 30 Nov. 4, 5, 6. Bay Ridge Model RR Club Show, 28 Marine Ave. at 93rd St. Hours: Fri. 7:30-10 PM; Sat. & Sun. 2-6 PM. O ga. RR & Trolley. Adults: 50¢, Children: 25¢.

FORT WAYNE, IND. 46808, Nov. 23. Fort Wayne Model RR Ass'n. Inc. Open House, 1429 St. Marys Ave. O and HO scales. 7:30-10:30 PM. Adm. free. Info. Michael D. Grogg, 7625 Worth Dr., Fort Wayne, Ind. 46809 Phone: 747-2650.

PHILADELPHIA (Suburbs), Pa. Dec. 3, 4, Jan. 7, 8, 14, 15. GATSMEE Lines Open House, Pennsylvania & Welsy Aves., Oreland, Pa. One mile east of Pa. Turnpike, Fort Washington exit. HO & HO₃ Progr. & Rte Cab Control. 1-6 PM. Contact L. A. Paahk, 216 Buttonwood Way, Glenside, Pa. 19038.

Club Notices

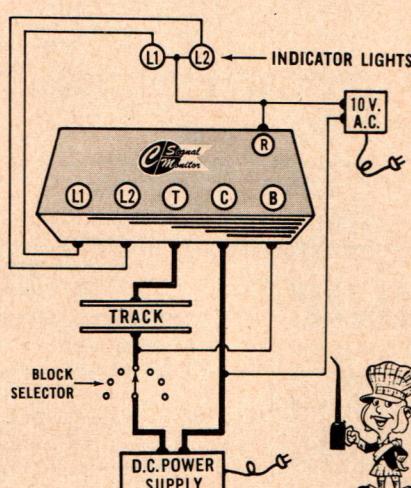
JACKSONVILLE, FLA. Gateway Model RR Club now located on 2nd fl. Jacksonville Union Station, N. E. cor. Mailing address: P. O. Box 2531, Jacksonville, Fla. 32203. Meet Tues. & Fri. from 7:30-11:30 PM. New members welcome.

WAYNE, PA. New club forming on Philadelphia Main Line. Info. contact Richard E. Bradley, 421 E. Lancaster Ave., Apt. C2, Wayne, Pa. 19089.

LONG ISLAND CITY, N. Y. Empire Model RR Assoc. welcomes new members over 21. Meet every Tues. at 8 PM, basement entrance 34-05 44th St. Visitors welcome first Tues. of month, op. night. Info. contact Hal Fletcher, 42-64 65th Pl., Woodside N. Y. 11377, or Wayne Foote, 37-68 64th St., Woodside, N. Y.

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LOS ANGELES, CALIF. Nov. 6, 10th Anniversary of Hi-Level equip. on Santa Fe will be celebrated by Pacific RR Soc. w/special Hi-Level train from L. A. to San Diego & return, leaving L. A. Union Station at 8 AM. Photo stops & side trips. Info. contact Pac. RR Soc., P. O. Box 5279, Los Angeles, Calif. 90055.



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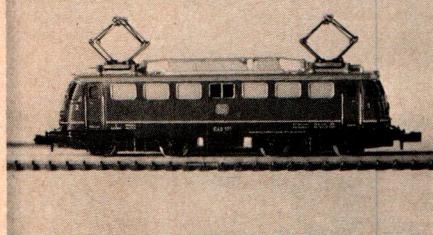
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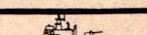


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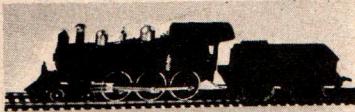
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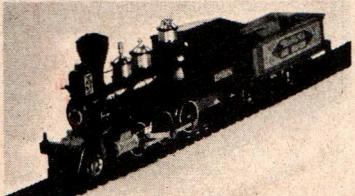
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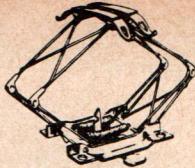
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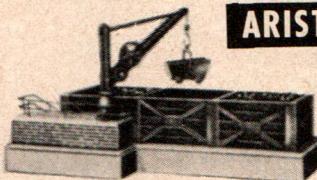
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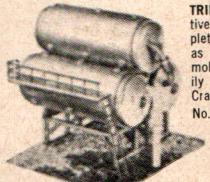
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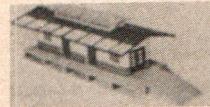


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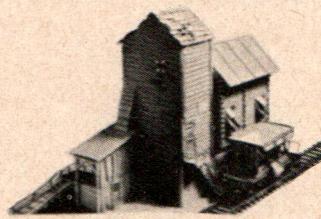
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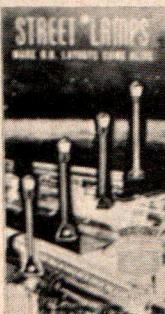


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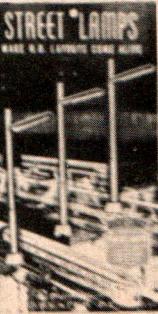
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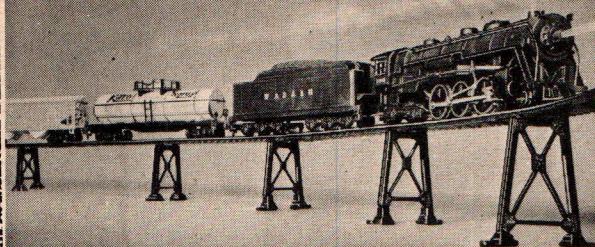


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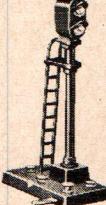
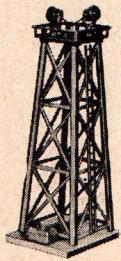
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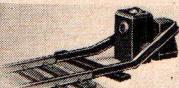
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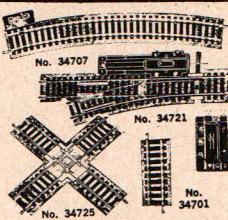
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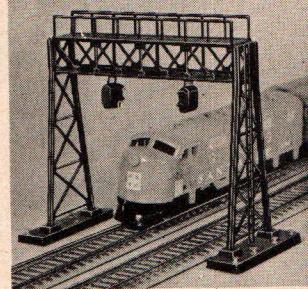
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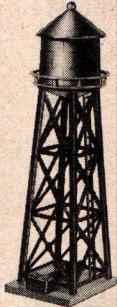
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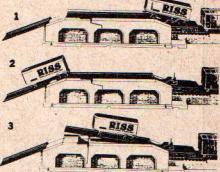
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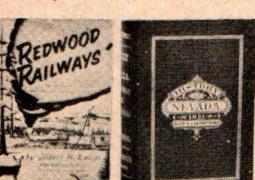
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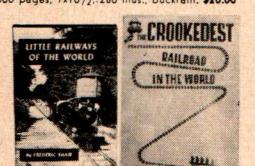
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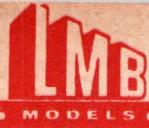
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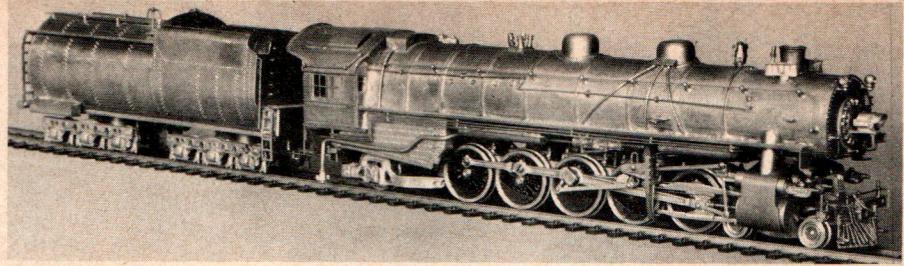
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U.P. 4-12-2, \$129.50
Same minute detail.

These three cylinder No. 8000 locos were built and delivered by Alco in 1925. They were rebuilt in 1942 to two cylinder engines for service in the Wyoming area and were known as the Overland type. A Deluxe Engine loaded with detail.

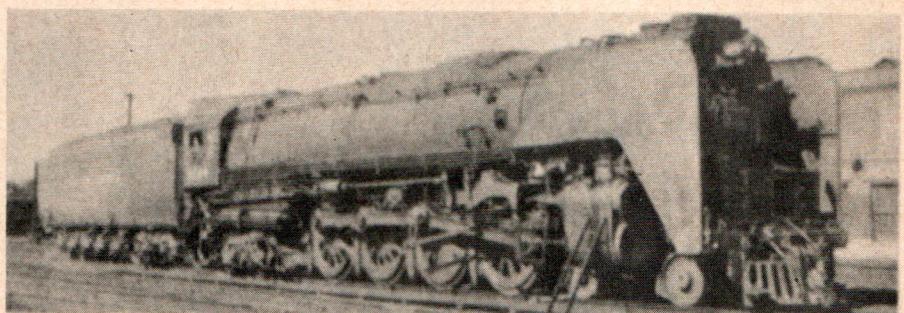
**WATCH FOR OTHER NEW
HO MODELS COMING**

UNION PACIFIC 4-10-2 RTR \$99.50



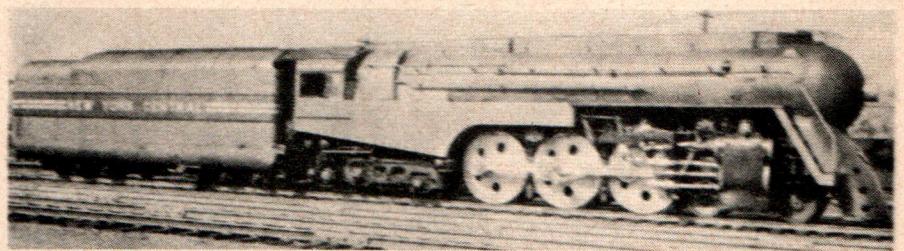
With the mighty Niagara, Steam Engine design on the New York Central reached its culmination. These superb locomotives utilized the best features of their most outstanding predecessors, the Mohawk's eight coupled drivers for high tractive force and the Hudson's four wheel trailing truck, allowing larger firebox area for generating more steam. The 6000's were the optimum of NYC's steam power. Although it was a losing battle, the Niagara matched the diesels at every turn and beat them at some. These models feature all brass construction, fully sprung drivers and tender truck, including a 14 wheel tender. Detail never before available on a Niagara.

N. Y. C. 4-8-4 NIAGARA RTR \$69.50



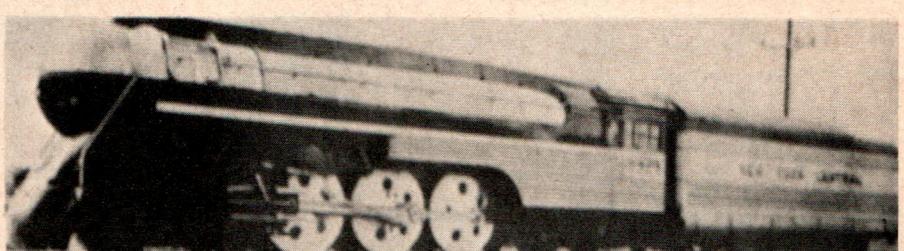
The high mark of NYC's streamlining came in 1938 when designer Dreyfuss streamlined the J-3a Hudson's, incorporating the locomotive into his new design instead of trying to disguise it. The handsome lower running gear was left exposed. These pace setters of style and prestige symbolized the New York Central for the next eight years. 5445-5449 had Box Pox Drivers. 5450-5454 had Scullin Disc Drivers. Available Extra: 14 Wheel PT Centipede Tender \$24.95

20th Century Limited Hudson . RTR \$64.50



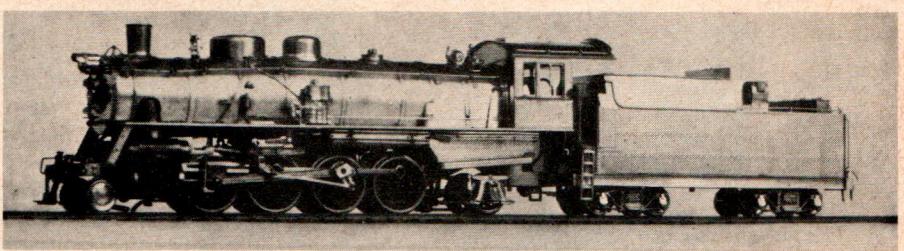
Super Hudson's 5426 and 5429 were streamlined in 1941 to haul the Empire State Express. The style was similar to the type used on Central's "Century," except that the fluting was adapted to conform to the new Budd cars, along with Scullin disc drivers and 12 wheel streamlined tender.

Empire State Express Hudson . RTR \$64.50



Class O-1a. This outstanding locomotive still in use as No. 4960 with switcher pilot, tapered boiler, laird crossheads, reciprocating and revolving parts, switcher tender, tapered sides, high coal boards, lost wax castings and dummy brake shoes. Originally 4940-4999. No. 4942, same class, with straight coal board tender and spoked pilot. Same price.

Burlington Class 0-1A 2-8-2 . . RTR \$59.50



NYC H1OB Mikado 2-8-2 59.50
NYC (B&A) Berkshire 2-8-4 64.50
Texas & Pacific 2-10-4 69.50
Boston & Maine Berkshire 2-8-4 69.50
Norfolk & Western 4-8-0 49.50

HO Forney 2-4-4T	19.95	NYC & HRR 4-4-0	29.95
HOn3 Forney 2-4-4-T	19.95	Double Crossover Brass	9.95
HK Porter Mogul 2-6-0	22.50	Double Crossover Nickel Silver	11.95
Double Truck Birney Trolley	19.95	3-Way Switch Brass	4.95
Single Truck Birney Trolley	12.95	3-Way Switch Nickel Silver	6.50

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LMB MODELS
10101 Woodland Ave.
Cleveland, Ohio 44104



Morton's Stone Cutting Plant By E. L. Moore

Morton's stone cutting plant is an action packed structure with its open saw and outdoor siding and crane. Build it from wood sheet and strip.

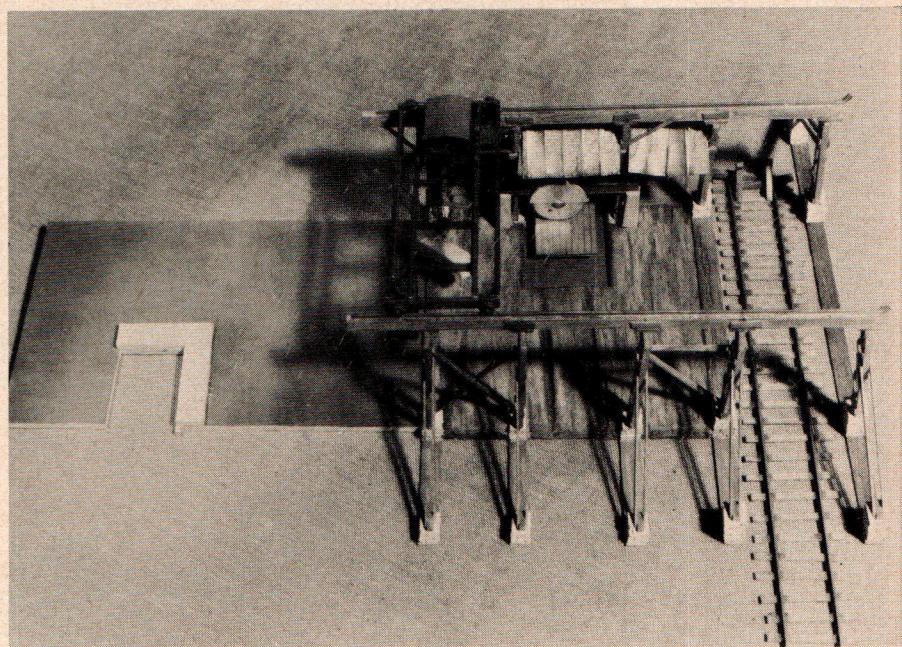
ABOVE: Heavy bracing to support the overhead traveling crane make this stone cutting facility a delight for any pike. It's all wood construction.

BETWEEN: Trackside view of the Morton stone shows the heavy bracing of the crane, a car being loaded, and the large circular saw.

THE old plant is showing its age," remarked the manager as he took me through it. For me, that was all to the good. I like old buildings. And the plant did, in fact, look every bit of its forty years, yet good for at least forty more.

Working stone, I am told, hasn't changed greatly with the passing years. Circular saws slice through great slabs of sandstone and, except for the continuous spray of water fed into the cuts, they might be cutting through wood. And compressed air tools now play a large part in facing building stone. Still and all, the processes are dependent on human skill and this requires workmen with long years of experience, who have a "feeling" for stone; as well as the artistic ability to work the intricate patterns sometimes required.

Huge slabs of sandstone come from quarries by flatcar and are unloaded at the plant by means of an overhead traveling crane. One crane works the



yard and another, on the continuation of the track, does the inside work. The stone in its finished state is then hauled to building sites on flat bed trucks. My plant occupies a space 8"x12", which includes the railroad siding at the yard end.

Although this looks like an impressive list, aside from the first few items it is all small stuff.

The project is going to require, first of all, a base; so check with Figure 1 and the aerial photograph of the plant in its early stages. The plant was

built on sloping terrain and to get around this I've built up the yard area using two thicknesses of the base here. So the first requirement is to cut 77½' from a sheet of ½" x 4" balsa. 45½" of this should be 29" wide, and the remaining 32' will need a 1' x 32' strip to be cemented to one side, and another piece 15' x 32' to the other. Now an additional 31' x 32' piece with a cutout at (B) is cemented on top, with the grain at right angles to the other. Since this raised portion constitutes the earth covered yard I roughed it up somewhat with a brass brush and painted it an earthy color, the rest of the base is a neutral brown. A cutout is made at (A) which will coincide with a door opening and allows trucks to back in for loading. In the prototype this is a shallow pit in the earth floor with a concrete ledge serving as a loading platform.

Turn the base upside down and cut shallow indentations, 1/32" deep, by a scale 2' x 2½' to coincide with the spaces (D) along one side, and into which the ends of outriggers (C) are cemented. These are 1/32" x 1/4" strip-wood cut into 2' x 15' pieces. On the outer ends of these will be cemented piers of simulated solid concrete or concrete blocks. In use, these outriggers will be covered with grass or earth or rendered inconspicuous. A similar strip, 56' long, is laid beyond the railroad siding, but this will not be joined until the final moment because of possible damage in handling.

As may be seen in Figure 2 the mas-

ony piers which border the railroad siding are 4' high, while all the others are only 2' high. In theory the yard (2 thicknesses of 1/8" balsa) should be 2' high, but is actually only 1 ¾", so 6 piers of those marked (D) need only 1/32" pieces of stripwood, 2' x 2½' as bases for the trestle supports. I made my masonry piers of 3/32" balsa, cut 2' x 2½' and cemented one atop the other and scribed. The piers at (E) match those at (D) in size and height. On the top of the (E) piers cement small blocks 6" x 9" x 2" on their 9" sides—to these the outer ends of braces from the trestle supports will be cemented.

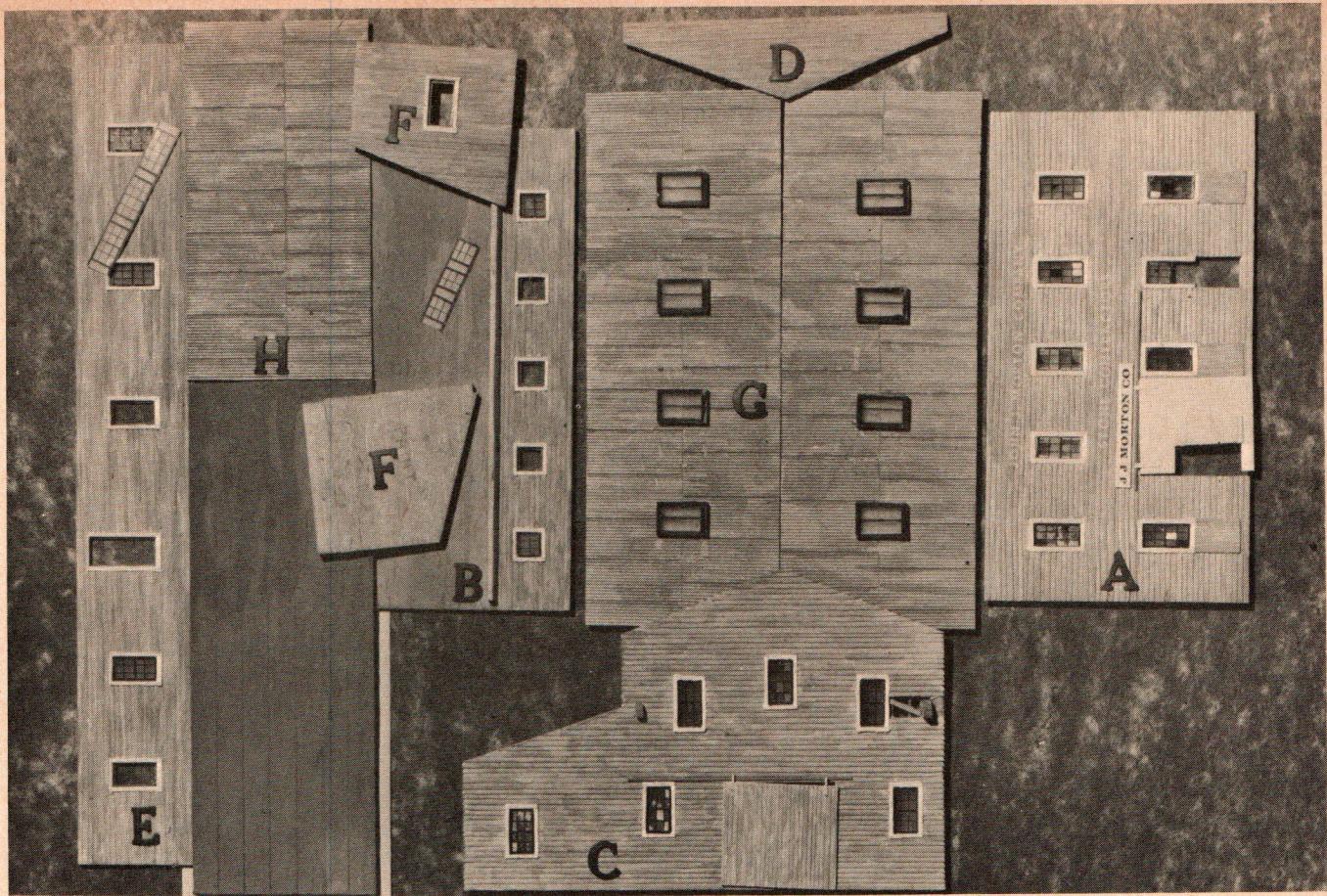
Now to build the supports, which in a manner are similar to trestle bents except that each row of supports carry but a single rail. I built a template on cardboard, using 1/16" balsa, leaving a rectangular opening 2 ½" x 14 ½" in which six supports were built. I then shortened it to 12 ½' and built the remaining four. The procedure is to lay a 6" x 9" x 2½' block at the bottom on its 9" face, and then added the two up-rights, one 6" x 9" x 13 ½", the other 9" x 9" x 13 ½", and top it off with another 6" x 9" x 2½' block. There's no set pattern in adding the short braces. When completed, the supports are lined up on the (D) bases or piers, making certain they stand straight, add the 3" x 9" long braces which extend to the (E) piers. Cross braces may be added between the supports as in Figure 2. When all are lined up, bring on your top beam which is

12" x 18" x 55' long, and to which code 70 (or smaller) rail is cemented to one 12" surface with Pliobond. Blocks, 6" x 12" x 2½' are cemented to the underside of the beam at intervals to coincide with the supports as seen in Figure 2. Care must be taken to keep the rails equidistant at both ends, otherwise your traveling crane may have some difficulty navigating.

The framework of the traveling crane may now be made, the general plan of which may be seen (F) inside Figure 1. While it calls for 4 I-beams, in the absence of these I used 3" x 12's" with 3" x 6's" cemented to tops and bottoms. These, 26' long, are joined at the ends to pieces 3" x 18" x 11' long. Brace the corners well. Now for the wheels. At least they resemble flanged wheels. I used two paper punches, one making a hole about 15 scale inches in diameter, and the other about 21". I punched out 8 cardboard circles from 1/32" material, then cemented them together in pairs, giving me 4 1/16" wheels 15" in diameter. The other punch furnished the flanges from postcard stock, which were cemented to the wheels, then to the carriage ends. Otherwise you'll have to cut the flanges with scissors and the wheels from dowel stock. I painted the carriage frame a dark green, the wheels black and touched the wheel centers with a dot of lighter

BELOW: Aerial view of yard in first stages of construction, with completed yard area. Method of construction applies to all popular scales.





All parts except base are shown laid out in photo above, ready for assembly, lettered for ready identification. Building is not too large for average layout; won't overpower scenery.

color. Better check your track width to see if the carriage frame as I have it will fit—you may have to make a slight alteration in width. Attached to the underside of the carriage frame

is a suspended cage-like affair shown in Figure 3 and which contains the motored power for the crane. It is 3'x5'x5', has a 3'x5' stripwood floor and is otherwise built of 1/32" square stripwood.

My hoist, which travels from one side of the yard to the other across the top of the crane carriage, is more

or less a caricature of the prototype, consisting as it does of a small watch gear, couple of dress snaps, a simulated motor mounted on a 5'x5' base of 1/32" stripwood, which in turn sits atop $\frac{1}{8}$ " dowel axles with flanged wheels cemented to the ends, and with a curved canopy above to shed the elements.

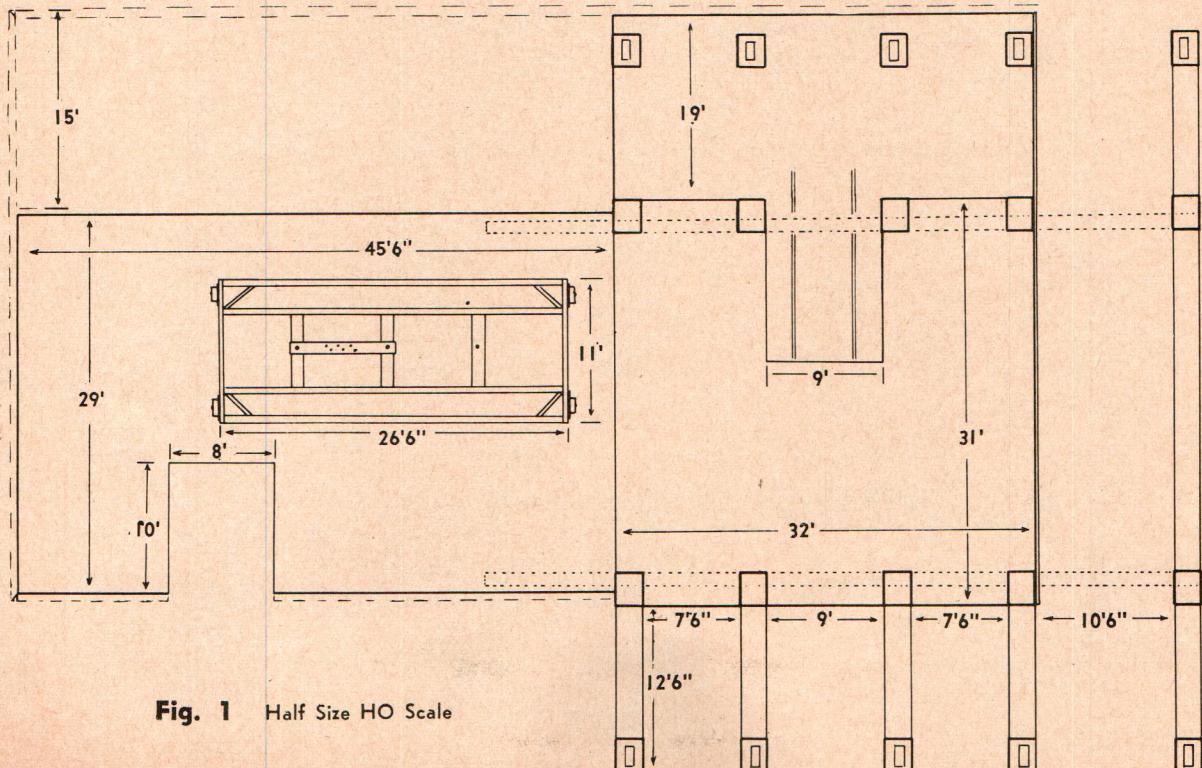
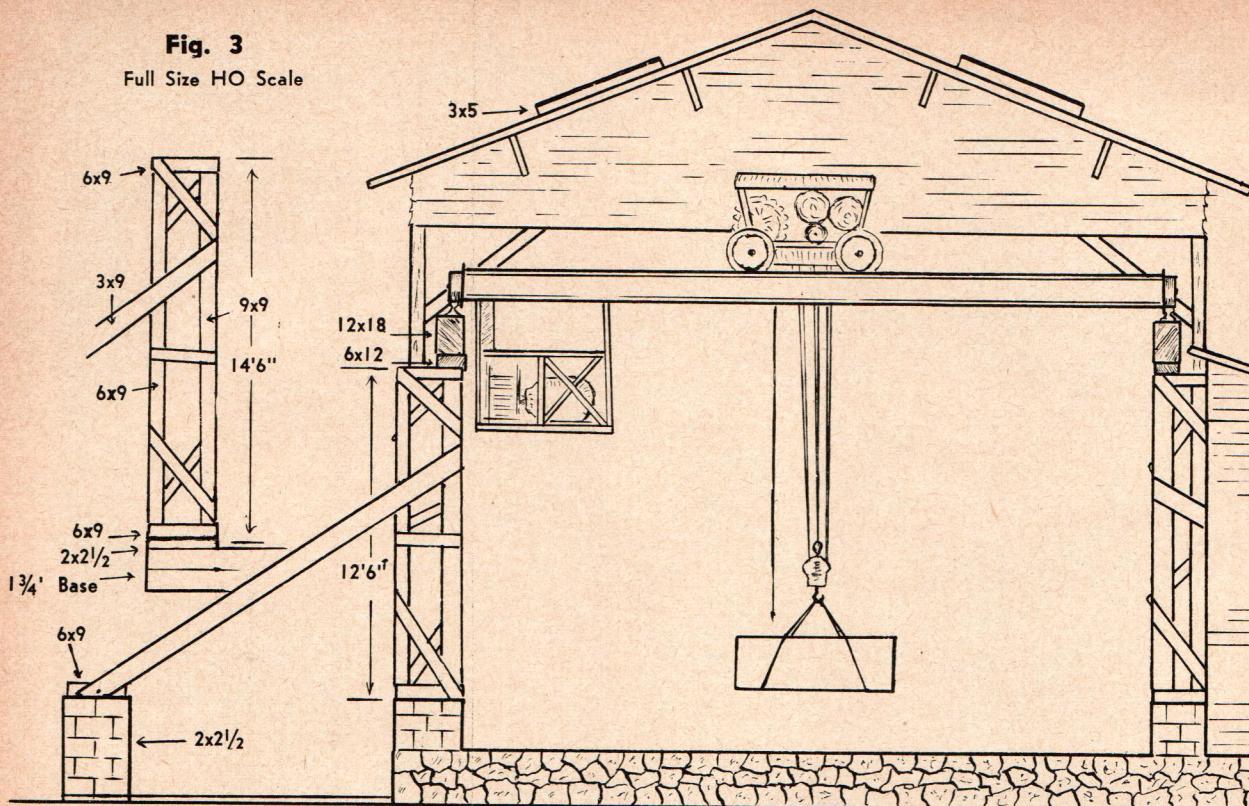


Fig. 1 Half Size HO Scale

Fig. 3

Full Size HO Scale



Required Materials: HO

24" 1/16"x3 1/2" Northeastern clapboard siding (1/16" spacing)
15" .040x3 1/2" Northeastern corrugated roofing (.040 spacing)
24" 1/8"x4" Sheet balsa for base etc.
7" 1/16"x4" Sheet balsa or sheetwood shed roof
16" 1/32"x1/4" stripwood for outriggers

15" 1/8"x3 1/16" balsa or stripwood for track beams (12x18)
24" 1/32"x1/8" stripwood (3"x12" HO)
48" 1/32"x3 3/32" stripwood (3"x9" HO)
24" 1/32"x1/16" stripwood (3"x6" HO)
24" 1/16"x3 3/32" stripwood (6"x9" HO)
24" 3/32"x3 3/32" stripwood (9"x9" HO)
15" Code 70 (or smaller) rail 10 sq. inches acetate



The block, underneath, with its 6 supporting cables, may be seen in Figures 2 and 3. It is a bit of strip-wood filed to shape, with an eyebolt at the top and a hook at the bottom. One thread is run through the eyebolt and two through holes in the block. The six thread ends are then passed through drilled holes in a piece of stripwood which is anchored in the crane carriage as may be seen in Figure 1. This was more accessible, although of course in the prototype the block was suspended from the hoist, itself.

(B) in Figure 1 is a cutout simulating a shallow pit with rails. The rails are merely brown paper strips. The carriage in the pit is 7'x8' and stands 18" high on its wheels. Its purpose is to move the large slabs of sandstone into position so that the moving circular saw can make its cuts. The saw is a gear from an alarm clock (could be made from card stock, notched and painted) with the upper portion covered with a guard and a motor mounted above. It travels along an I-beam whose ends rest on 5½' tall stone piers. I was fortunate in making

my first photograph of the saw while it was partially sheltered from the elements by old sheets of corrugated roofing. On a later visit I noticed this had been replaced by a less pictures-que but well constructed shelter. My tin coverings were salvaged from an old toothpaste tube. All exposed wood in the yard such as beam, supports and braces was weathered a silvery gray.

This finishes the yard, so now to the other end. Cut from clapboard siding, one piece 24'x46', this being the side shown in Figure 2. What I

Fig. 4

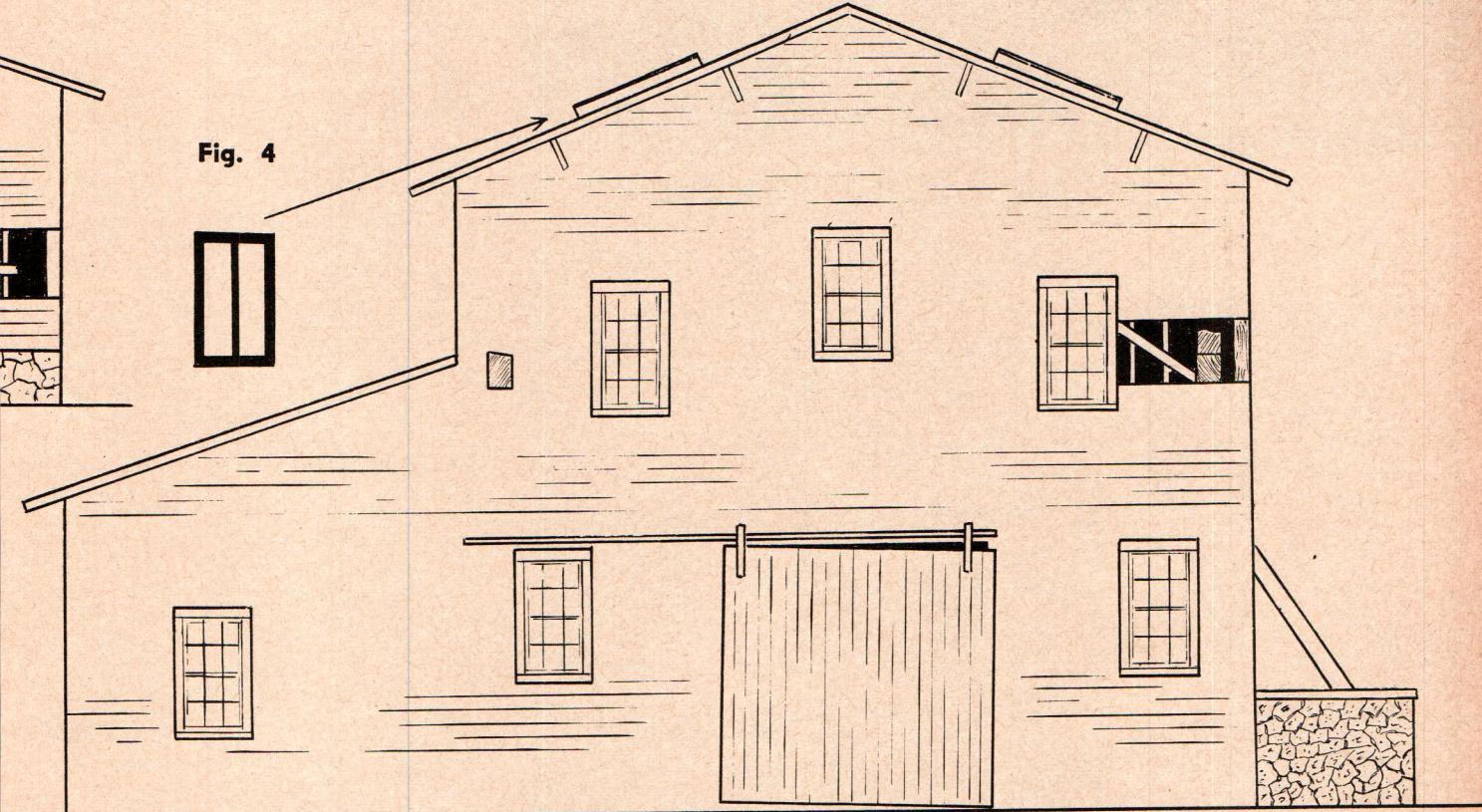
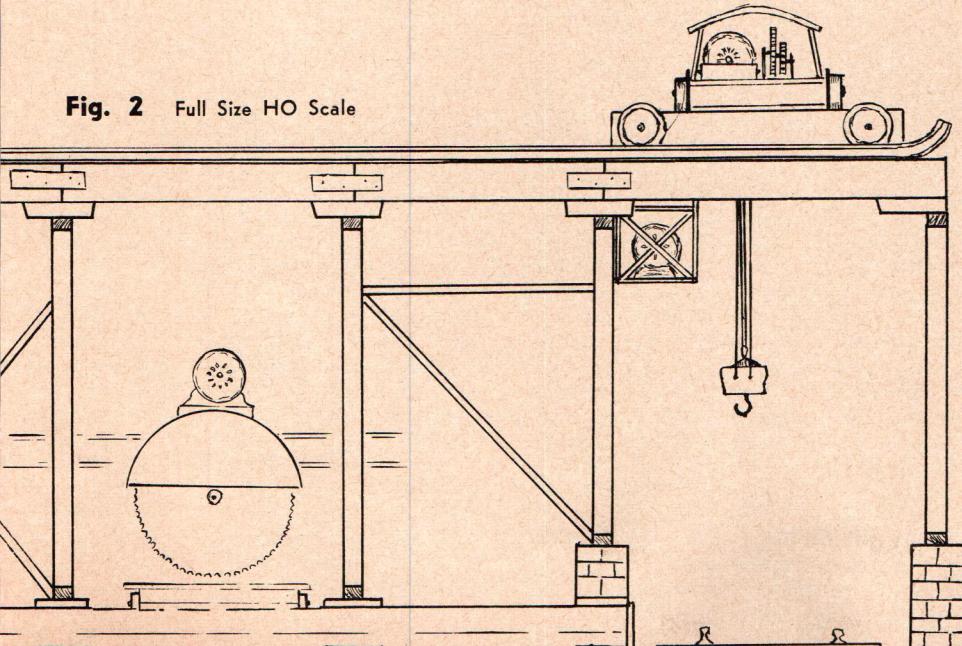


Fig. 2 Full Size HO Scale



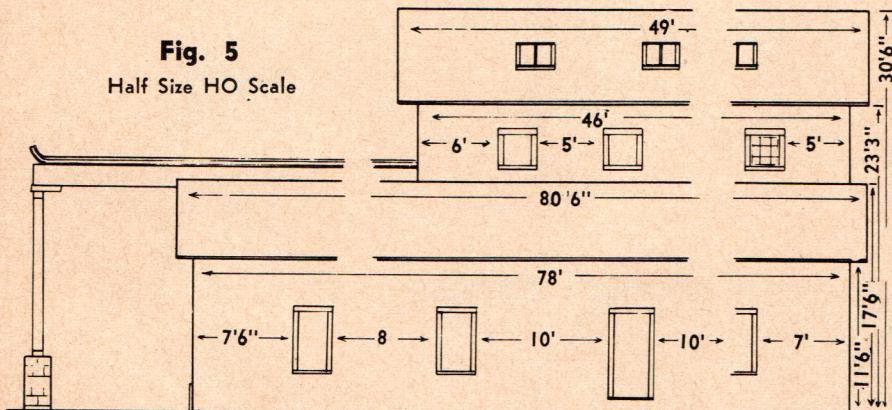
did to Mr. Northeastern's pretty siding would probably cause him to weep. On the back of it I laid out the window and door openings, cut the window openings 3'x5', casing them with white prepainted 6" square stripwood, except for the bottom sill which took 3"x6" stripwood. Inside this went 3" square stripwood window stops. Bevel the wall end as the building has no corner posts. If you'll observe closely you'll see that I cut my wall 6" too short and therefore had to butt it up against the end wall.

Now to the paint job. While it isn't likely you'll want to follow me through with all the decal work, still here is how I proceeded. The building has a bleached out red paint job, and the dust from stone being worked with compressed air tools is much the same as you'd find around a flour mill. So I first gave the wall a coat of railroad white diluted with 10 parts thinner. When this dried I mixed boxcar red 5 parts, caboose red 5 parts, yellow 1 part, and thinner 20 parts,



Rear view of plant from the yard end with all shrubs, grass, and other scenic details in place. Notice small sub-station at right.

Fig. 5
Half Size HO Scale



and applied this to all but the window frames. Then, using Gothic $\frac{1}{8}$ " decals I applied the original company sign. Over this went more of the diluted red, streaking it on until I obtained the desired effect. I added a little extra yellow and streaked this on at random. Later, too, I dusted the wall with pumice stone powder. Over the doorway I put up a fresh sign and made a door of $1/32$ " scribed sheathing, cutting a smaller walk-in door at one side. The little matter of the saw track which juts out below a window to the right of the door, and the display wall at the corner, may well be left until the building is assembled and on location.

Now to the opposite wall (B) in the Kit Photo, and an abbreviated showing of it in Figure 5. Make this 24'x 45 1/2' as it will butt up against the end. Make it either from one piece of siding, or, as I did, cement a 7'x 45 1/2' strip to a piece of plain 1/16" balsa or sheetwood, 17'x45 1/2'. The 3'x3' window openings are spaced just as are the windows in the opposite wall. Attach a 1/8" square strip of balsa the length of the wall with the top at 17' to serve as a support for the upper edge of the shed roof.

The end wall, Figure 4, is 45' wide,

12' high at shed eaves, 24' high at barn eaves, and 30' high at peak. Bevel both sides to fit at corners. Window openings are 3'x5', and a door, 10'x10 1/2' hangs in a closed position so there is no point in cutting an opening other than possibly a little slit at the top. Ends of track beams jut through.

Once the windows are installed the three sides may be assembled. I used frosted acetate, obtainable at office supply stores, for windows and skylights; its matte surface simplifies the inking-in of pane divisions. Windows come in two sizes, 22 of the full size and 5 of the small ones, plus 8 skylights 3'x5'. I sketched the windows in detail with pencil on white card stock, fastened acetate over this and inked them in. They were installed glossy side out.

Before assembling it will help to cement $\frac{1}{8}$ " square balsa strips vertically at the corners. Then assemble, and cut out the other end shown in Figure 3, (D) in Kit Photo. It will help here to cement a piece of $\frac{1}{8}$ " balsa, the same size but only 29" wide to the back of the siding before cementing in place. Gives greater cementing and holding surface.

We already have one end of the

shed, so cut the other as in Figure 3, 15' at the peak and 10' at the eaves. Being a long shed it will also need a center brace the shape of an end. Make this of $\frac{1}{8}$ " balsa, $14\frac{1}{2}$ ' wide, 17' at peak and 12' at the eaves. The shed wall (E) in Kit Photo, is one piece of siding 12'x78", both ends beveled. Placement of door and windows is not important here. The shed roof is in two parts, one end 17'x47' is 1/16" balsa or sheetwood and is painted a gray and lined to simulate roofing paper. The other end, 17'x33 $\frac{1}{2}$ ' is Northeastern corrugated roofing, painted aluminum, then stained a rust color.

The main roof, each side of which is 18'x49' is also corrugated material and painted like the shed roof. This has to be pieced so I cemented each side to a piece of $\frac{1}{8}$ " balsa 15'x44'. then beveled the top edges to a fit and cemented them in place. The acetate skylights were set on rectangular frames made of 1/16" square stripwood, painted black. At the ends of the roof, under the eaves, are short braces of 1/32" square stripwood.

A display wall of simulated stone goes at one corner, as seen in Figures 3 and 4. I made this of $\frac{1}{8}$ " balsa, the wall 4' high, the ends 6' wide and the side 12' long, mitering the corners. I gave this several thick coats of cream paint, then made a light pencil sketch of the stone formations on the surface. I followed up with a sharp awl penetrating only into the paint, topping it all with a few pastel touches of water color. A 3" coping of simulated stone tops the wall. A 3'x4' space was ripped out below one window and a concrete pier was set up outside attached to the wall at the base, and on this rests the outer ends of two short I-beams. A trough appears between these and drains off the milky liquid resulting from a circular saw cutting through stone slabs. The braces appearing alongside the building are best left until it is on permanent location. I assure you they are not there to hold up the building, but to brace the track supports.

but to brace the track supports. We are now ready to attach the outermost row of supports and braces to the end of the overhead beam. Add any braces which will assure rigidity. It is also possible to run a brace across at the bottom just beyond the end of the siding and perhaps a slender one fitting between the ties of the siding.

And finally, you'll be needing stone. Of the various items tried: soap, chalk, household wax and art gum, the latter was the most realistic when given an off white coating of railroad color, and it cuts easily with a jewelers saw. Household wax comes next, but is harder to cut, and unless painted has the look of ice. Both show in one photograph, art gum on the flatcar and the household wax in the background.

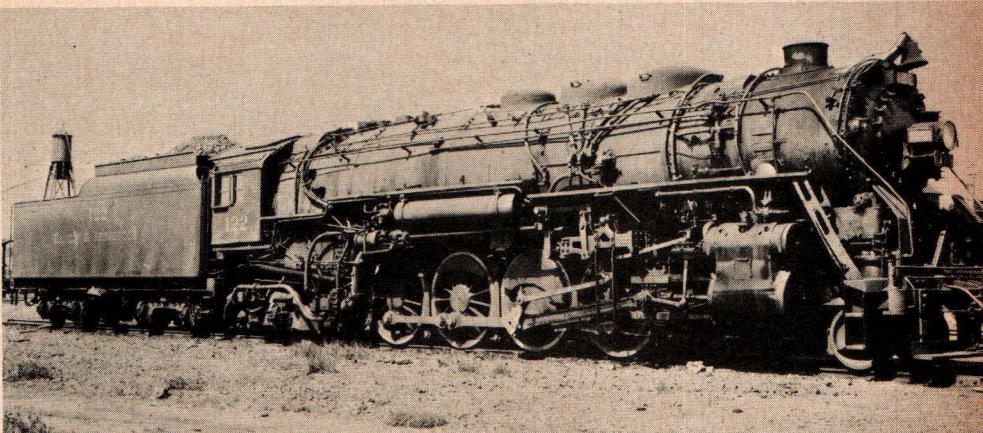
If you're thinking of selecting a tombstone, you're in the wrong stone plant. That's a stone of a different color, and another story.



New York, Ontario & Western Class Y-2

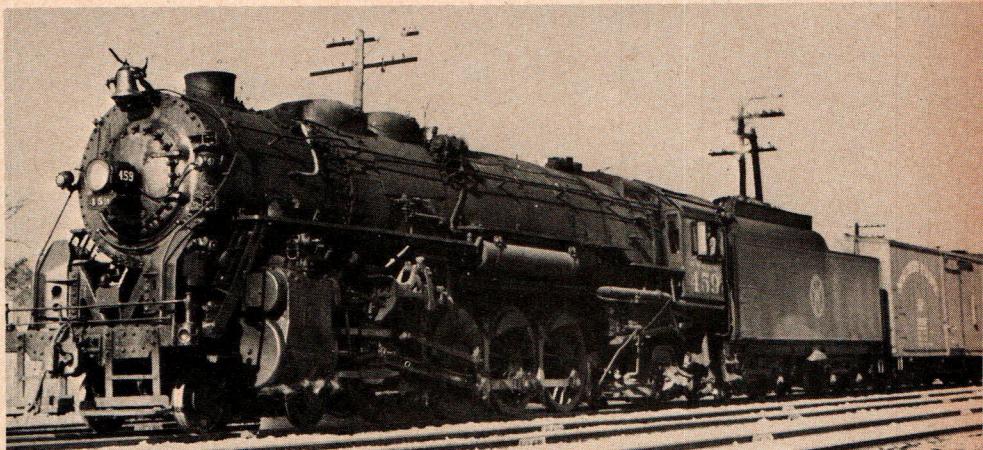
Text and supplementary data from Jack W. Farrell, Jeff Winslow, and Mike Pear-
sall.

Alco built 10 husky Mountain types for the New York, Ontario & Western having almost identical specifications as the 100 New York Central L-2C Class Mohawks built simultaneously.



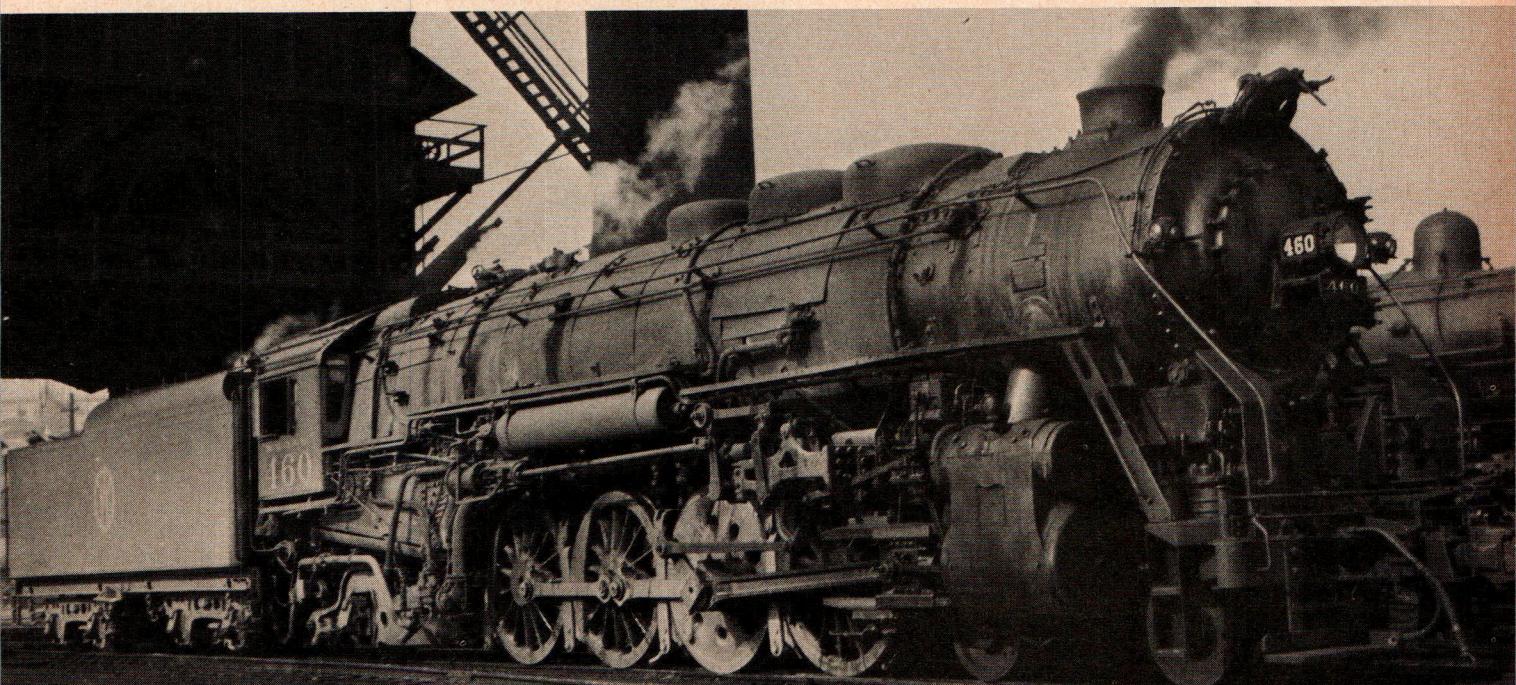
Bangor & Aroostook No. 122, caught by Harold K. Vollrath, at Derby, Maine, in August 1948, former NYO&W 459, shows a newly added BAR illuminated front number board. Coal bunker addition was built by O&W shop forces. BAR took five of the class Y-2s.

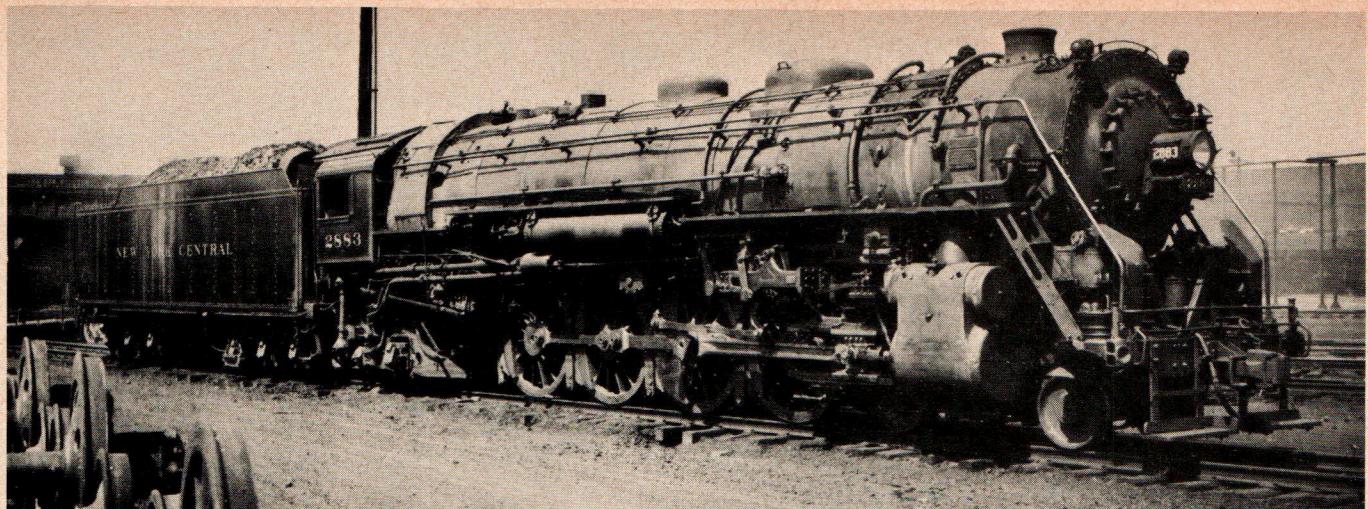
THE most modern and largest New York, Ontario & Western Ry. steam power were these 10 well-proportioned Mountain types which, an offshoot of the much more numerous New York Central Mohawks. The Y-2's and L2-c's, both built by the Schenectady plant of the American Locomotive Company in 1929, were identical in all major respects save for the smaller tender used by the NYO&W. A situation such as this was rather common with railroads in locomotive and car construction orders. It is rather obvious that duplicates of a design already engineered would be less expensive than locomotives of a brand new design with all new



Right side view of No. 460 parked under the giant wooden coaling tower at Middletown, N.Y., October 29, 1939. Unusual pilot beam is for snow plow attachment. NYO&W was heavy one time coal hauler.

A cold wintry day in the early 1940's finds 459 whipping AW-2 down the rock ballasted 4-track mainline of the West Shore. Y-2 class was heavier than sleek Y series used in pass. service.





New York Central L-2C No. 2883 basking in the sun at Harmon, N. Y., on a summery day in 1939, reflected a host of minor detail variations from the sister NYO&W Y-2 class. Tender is much larger.

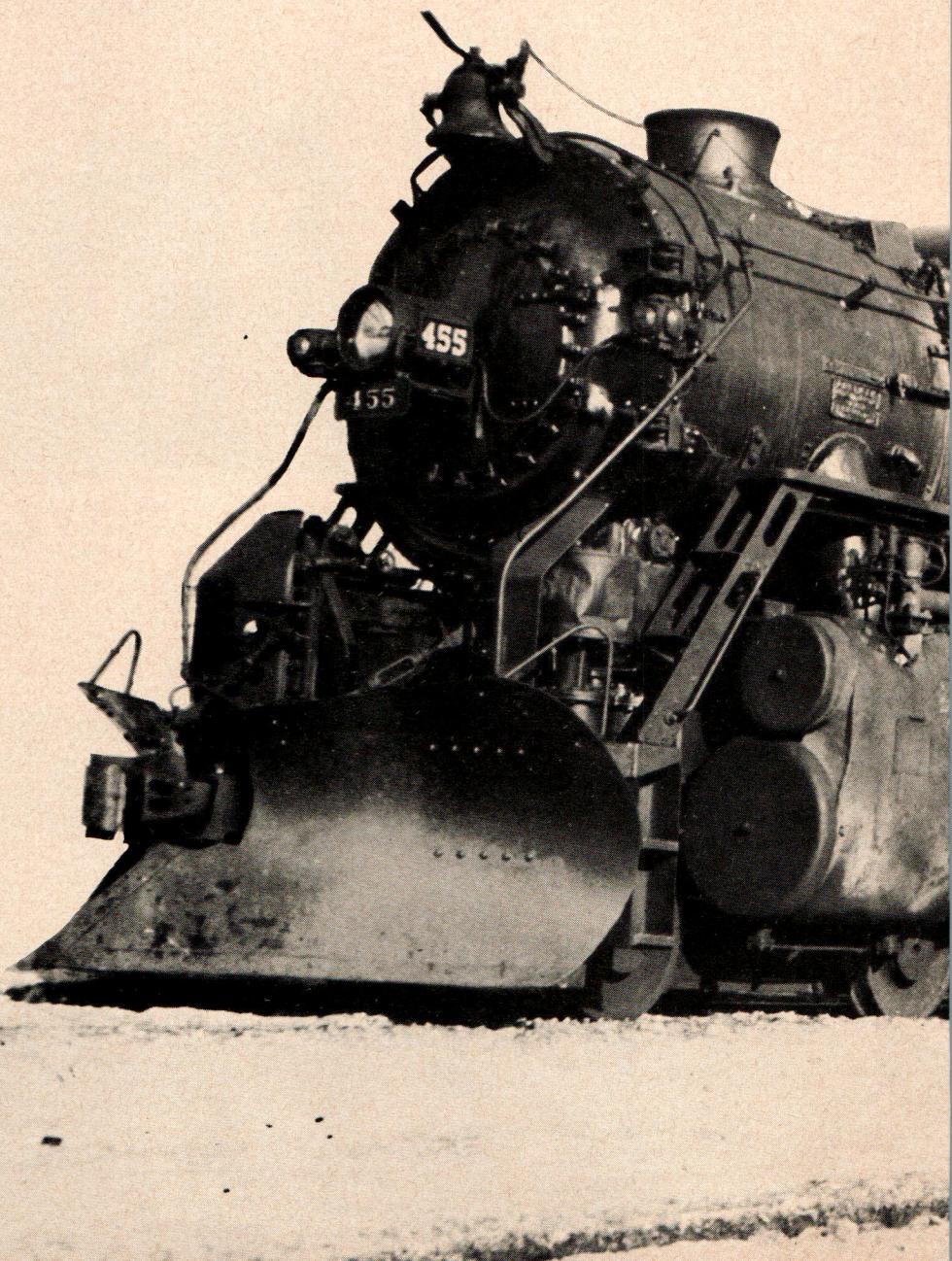
engineering costs. This was especially true of a small order such as the 10 NYO&W engines. By accepting a slightly modified NYC 4-8-2 design already planned, the NYO&W could save most of the design costs.

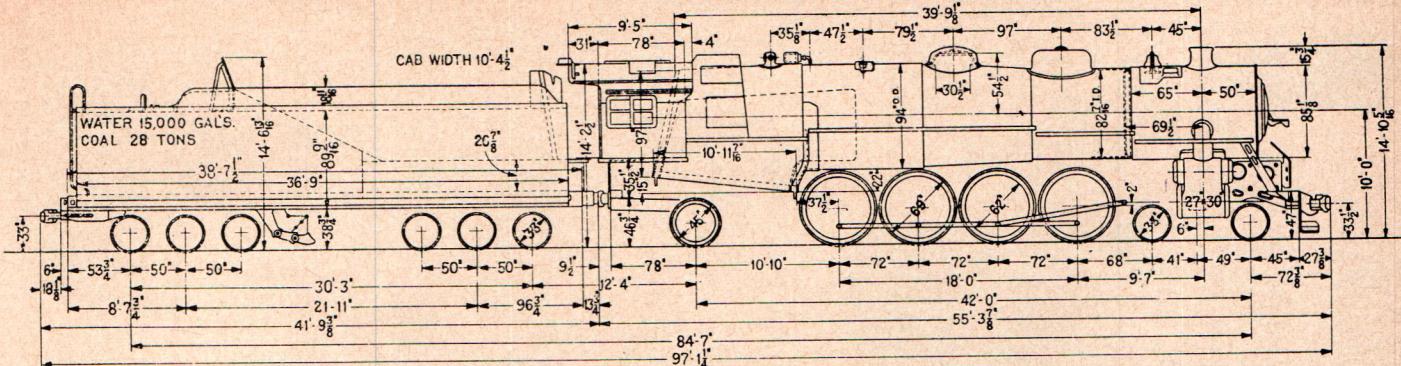
Construction of the 100 NYC L2-c class, 2800 series started in April, 1929 and continued through September. The 10 Y-2's were slipped onto the assembly line in July — if you can conceive of 10 300 ton locomotives being slipped anywhere.

The Kiefer-designed NYC heavy Mountains, longer, heavier and more modern than the USRA heavy design, showed most markedly the influence of the Central's famous Hudsons. The immediate addition of a second sand dome to the Y-2's was essential to a road whose profile contained ups and downs of a nature totally foreign to the original design's "Water Level Route". Kit bashing—prototype style! While the NYO&W engines had Elesco exhaust steam injectors rather than more conventional feedwater heaters as on the NYC L2-c class, they shared such other modern devices as front-end throttles, valve pilot indicators, etc. A few years after delivery, they were further improved through the addition of disc main drivers. Typically O&W is the use of Baker Valve Gear and such touches as the two small steps directly over the front wheels of the pilot truck — essential to authentic modeling, but murder on Snap-Track radius curves!

In common with the earlier Mountains, the Y-2 class were very free-running, a characteristic most beneficial to a road whose schedules called for faster time than speed limits could rationally permit, but whose freights offered impressive on-time performances in days before World War II.

Undoubtedly, these Mountain types were selected on the basis of the outstanding performance of a predecessor group of light 4-8-2's, (Class Y, and Y-1, engines 401-410). These latter, sometimes erroneously termed "light USRA copies", were the last NYO&W "scratch-built" power, designed under the supervision of Superintendent of Motive Power B. P.





Flory at Middletown. Somewhat smaller than the USRA's, they more nearly resembled the Southern's 1914 Ts class and were ideally suited to operating heavy passenger as well as fast freight runs.

In service on the NYO&W, the Y-2's were the road's heaviest and most powerful machines, outperforming some vintage 2-10-2's of 1915. At one time, 2-10-2 no. 355, while fitted with a tender booster, did exert more tractive effort. Ironically, the Y-2's were restricted to "on-line" operation during their first twelve years

because New York Central bridges on the West Shore would not sustain their weight. In later years, however, they were frequent visitors at Weehawken on the symbol freights and occasionally in passenger service.

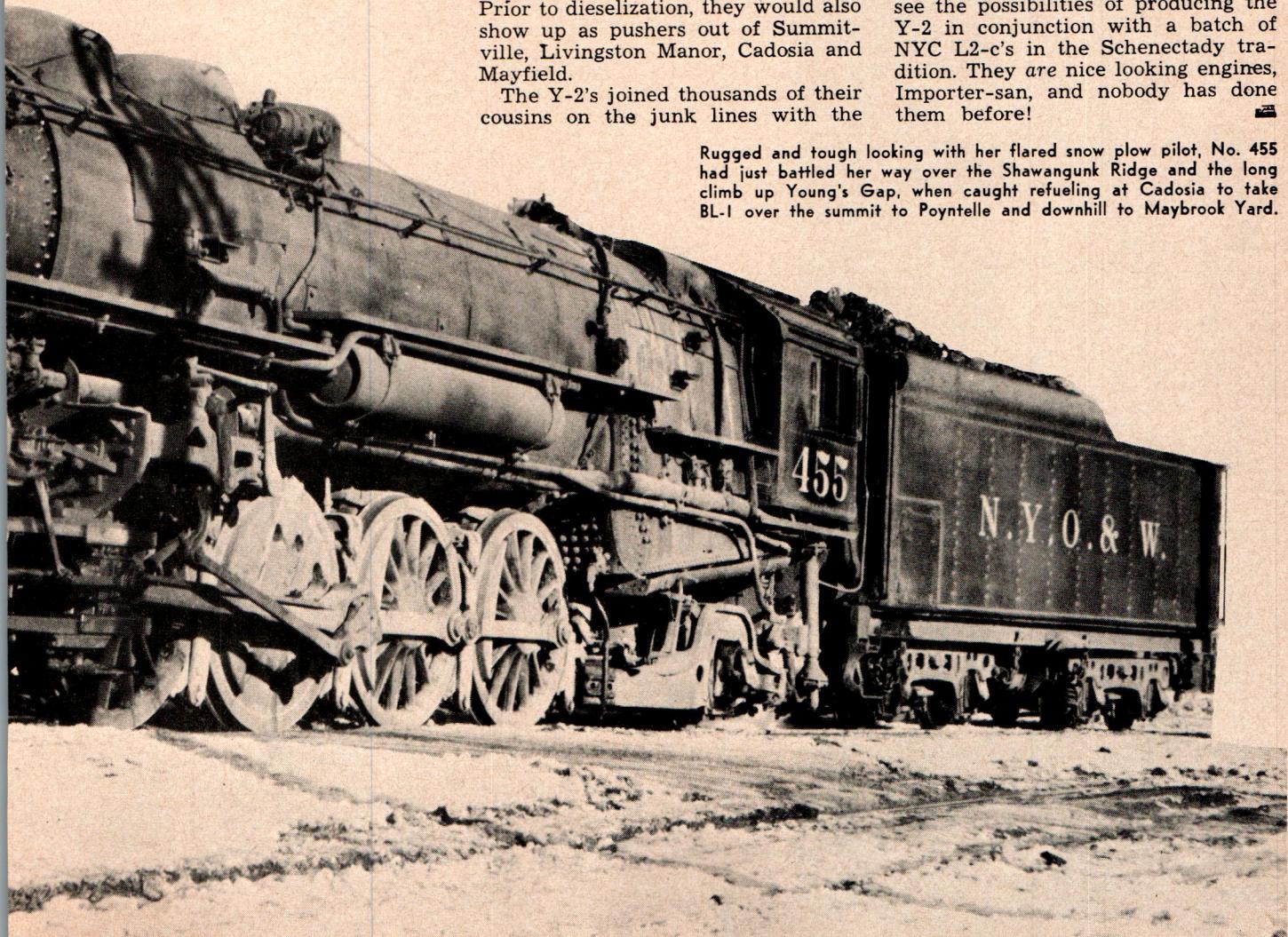
Principal stamping ground for the Y-2 class was the manifest service between Maybrook, New York and various connections near Mayfield Yard, Pennsylvania. Westbound BO-1 and BL-1, eastbound OB-2 and LB-4 linked the New Haven's Poughkeepsie Bridge route with the Lehigh Valley and Lackawanna to the west. Prior to dieselizeation, they would also show up as pushers out of Summitville, Livingston Manor, Cadosia and Mayfield.

The Y-2's joined thousands of their cousins on the junk lines with the

advent of the diesel, although they did survive well into the diesel age. In 1945, toward the end of World War II, five Y-2's were sold to the Bangor and Aroostook

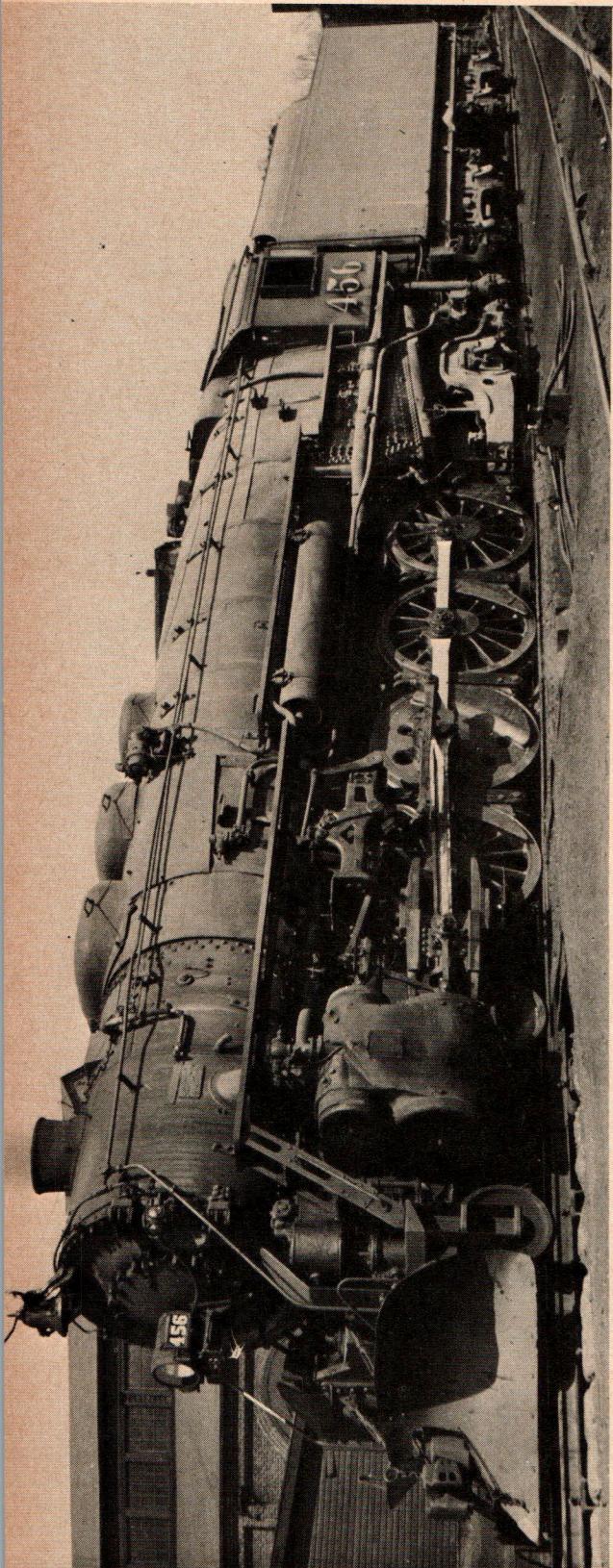
Parts for conversion or reasonably complete components for a scale replica of a Y-2, seem to be scarce. The HO NYC 4-8-2's once offered by Tereshodo, were of a larger class and would not be suitable for conversion. Some elements of the Bowser Mountain have possibilities. There is no "quickie" solution. A last resort is to pray that one of the importers will see the possibilities of producing the Y-2 in conjunction with a batch of NYC L2-c's in the Schenectady tradition. They are nice looking engines, Importer-san, and nobody has done them before!

Rugged and tough looking with her flared snow plow pilot, No. 455 had just battled her way over the Shawangunk Ridge and the long climb up Young's Gap, when caught refueling at Cadosia to take BL-1 over the summit to Poyntelle and downhill to Maybrook Yard.



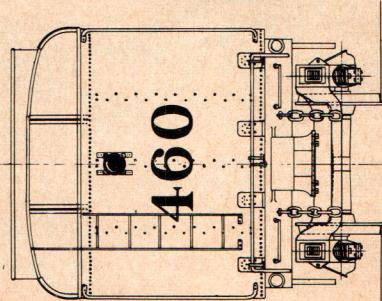
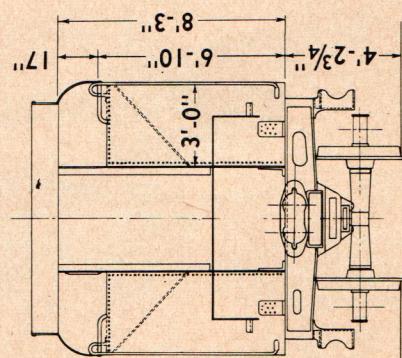
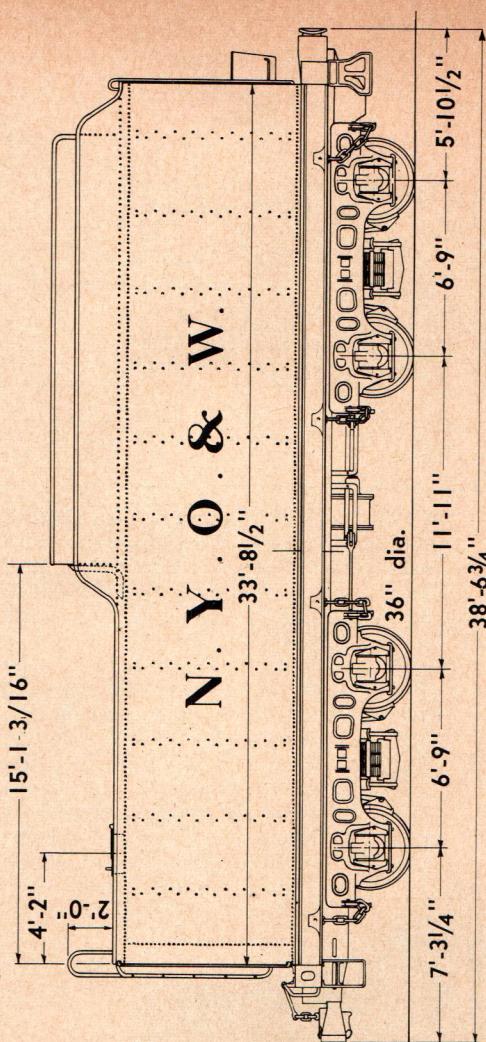
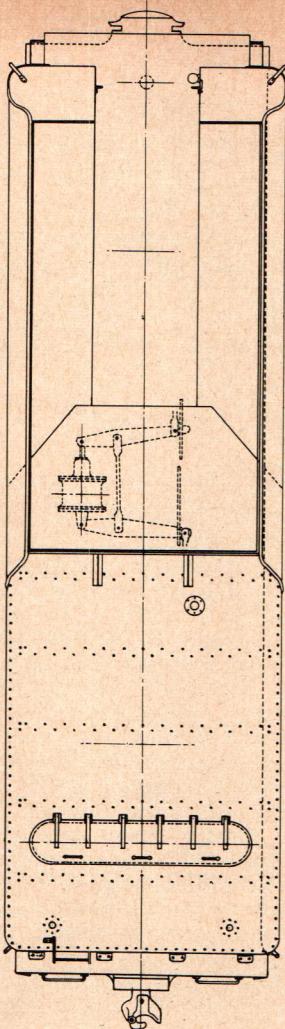


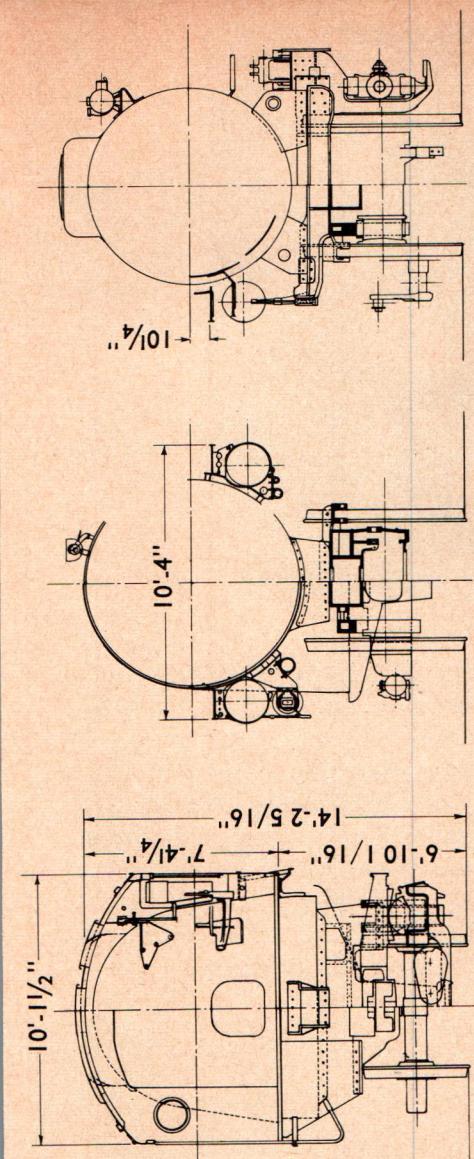
Renumbering of engines sold to Bangor & Aroostook NYO&W BAR
452 120
454 121
455 124
459 122
460 123



NYO&W No. 456 with snow plow on the ready track at Middletown as snapped by Jack W. Farrell, March 25, 1939, when locos were only ten years old. Notice addition of a disc main driver

drawn for Railroad Model Craftsman
by Ray Brown





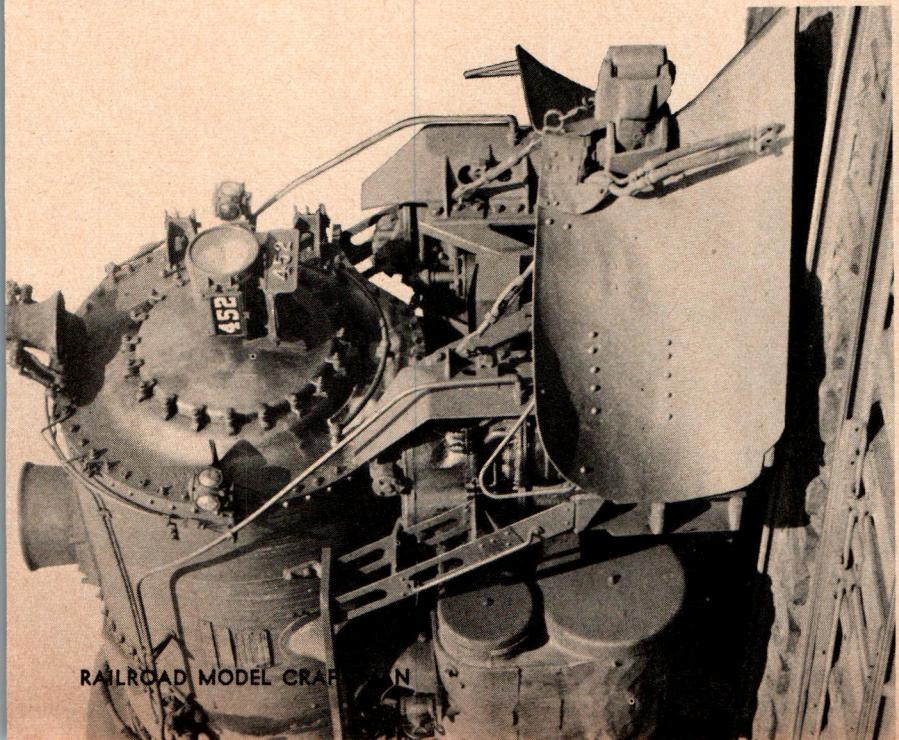
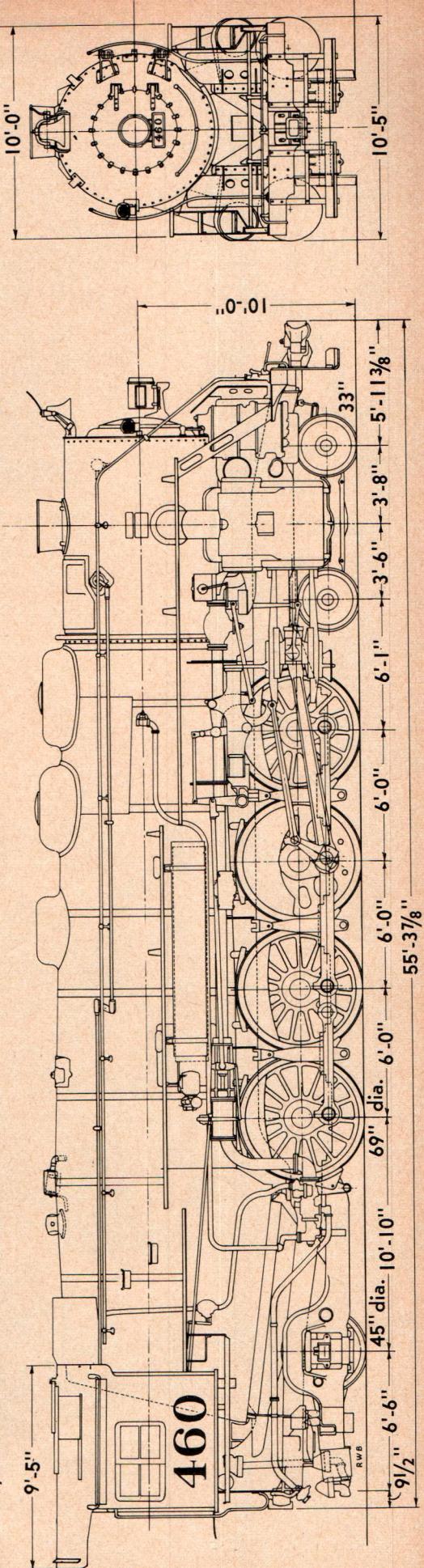
Photostats may be made to other scales for your own personal convenience. Railroad Model Craftsman retains all other rights.

NEW YORK ONTARIO & WESTERN CLASS Y-2 4-8-2: ALCO 1929

PRINCIPAL SPECIFICATIONS

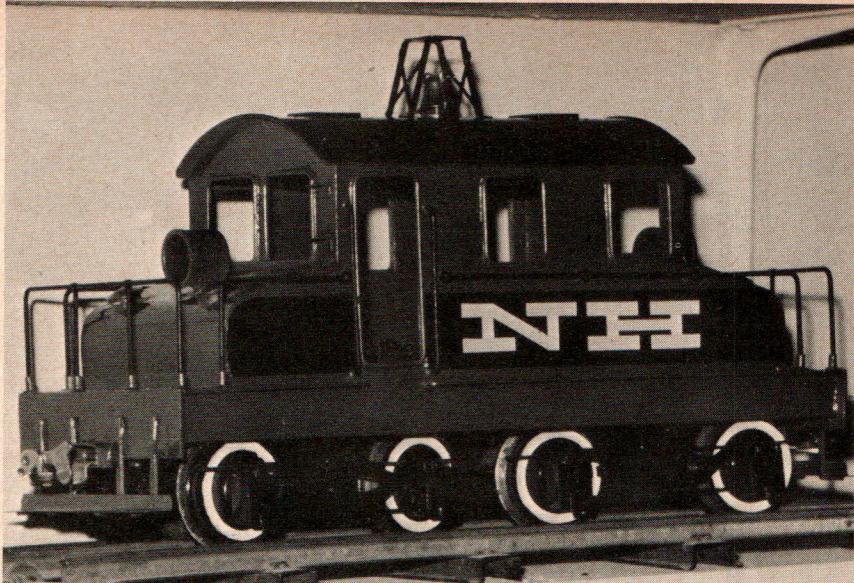
NYO&W	NYC	Traction Force	71,870	73,020
Y-2	L-2C	w/Booster	360,000	365,000
451-460	2800-2899	Weight Engine	599,900	675,000
Alco-Schen.	Alco-Schen.	Wgt. Engine & Tender	27" x 30"	27" x 30"
Builder	Apr.-Sept. 1929	Cylinders	67986-67995	
Date Built	Baker	Construction		
Valve Gear	225			
Boiler Pressure				

Closeup view of No. 452 showing plow used on some of the Y-2 class much of the year. O&W power sported several distinctive details.



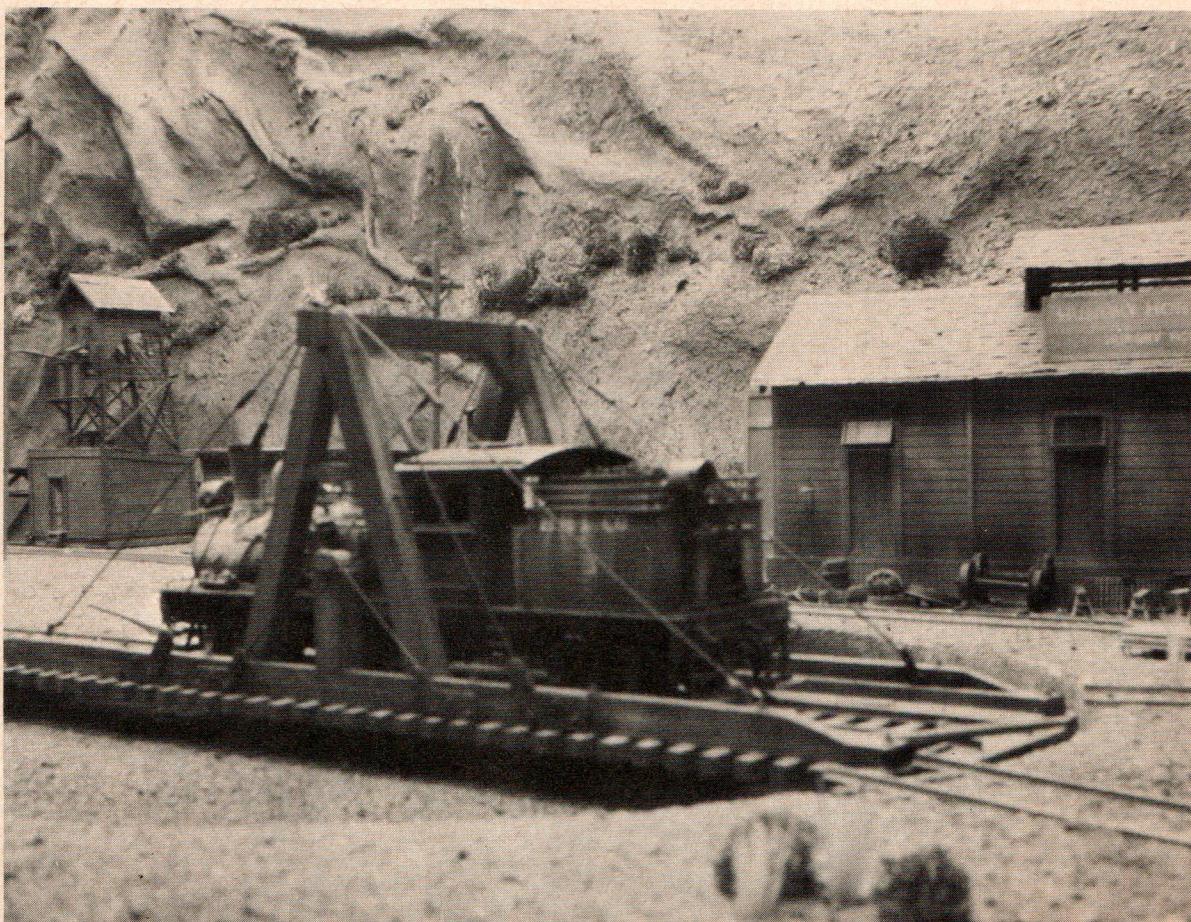
BOOMER TRAIL

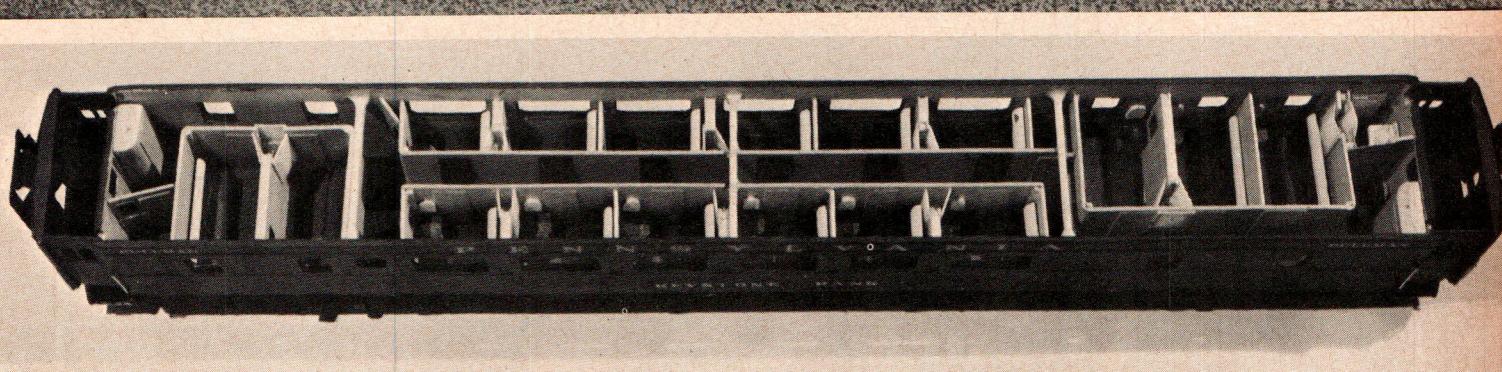
PHOTOS
FROM
READERS



Hoboken Shore Road electric switcher built from June 1958 RMC plans by David O. King, 1458 East 4th St., Brooklyn, N. Y. 11230, to Standard Gauge 7/16" scale. Both trucks are powered, headlights illuminate. Flanges and couplers are Lionel std.

We invite all readers to submit photos of their layouts for publication in the Boomer Trail. Photos must show good modeling and originality. We pay \$5 or more for all non-commercial photos used here. Send photos size 4x5 or larger to the Editor, Railroad Model Craftsman, 6 East Main St., Ramsey, N. J.

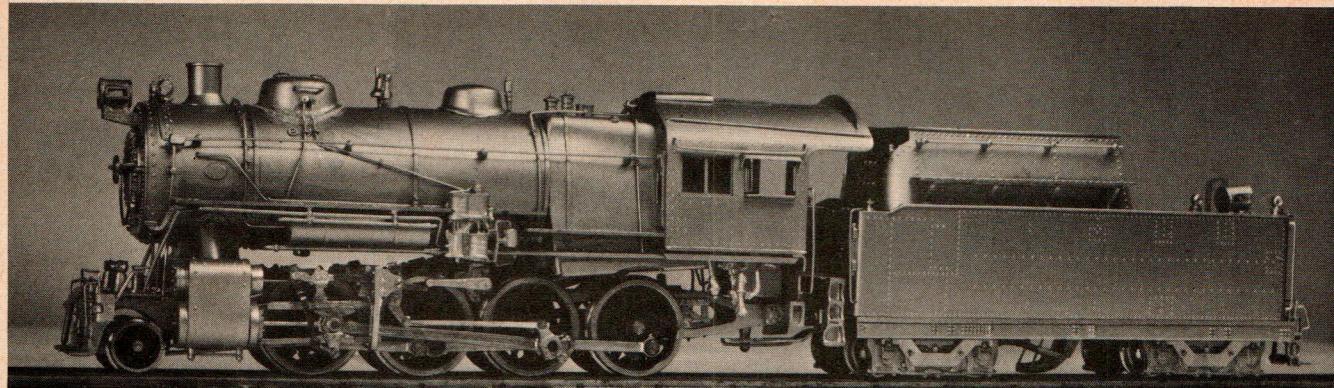




Rob Corriston's Hungry Horse Timber Company has progressed far in 18 months, abuilding atop the second story of a two car garage using conventional construction methods. An unashamed easterner, Ron has to research his logging step by step since Media, Pa. isn't exactly a logging area. Ron lives at Gayley Terr. & Park Ave.

Garnett Howard, Cincinnati, built this HO model of the Pullman sleeper Keystone Banks for Thomas L. Meacham, 1191 Northbrook Ct., Cincinnati, Ohio 45231, using wood and bristol construction. Central Valley trucks were revamped to correspond to type 242 used on the prototype. The interior detailing is done with wood, card, and plastic, and is illuminated with nine grain of wheat bulbs using a wiper style truck pick up providing blink-free light. The model was finished in Tuscan red slides and roof, Pactra flat black underframe, Floquil grime black, and Testors dullcote finish.





PENNSYLVANIA CLASS H-10S

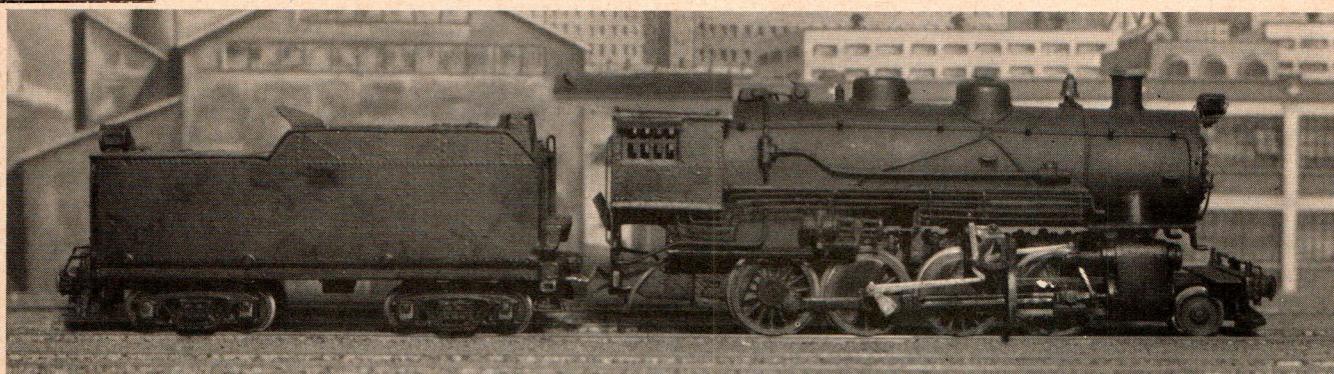
Pennsylvania Railroad and Long Island Railroad class H-10s. Similar to class H-8 and H-9. All brass model with coined and lost wax fittings. Enclosed gear box, sprung 62"

HO

drivers Japanese motor, wireless drawbar, universal coupler pocket on tender. Minimum radius 20". Overall length 11". Weight 18 oz. Mfd. in Japan by Olympic Precision

OLYMPIA-GEM

Industry Co., Ltd., for Gem Models, 160 West Chelten Ave., Philadelphia, Pa. 19144. Catalog No. GN-110, available in 1966. List price \$49.95, ready-to-run satin finish.



USRA CONSOLIDATION

USRA design 2-8-0. Machined, formed, and stamped brass boiler. Underframe cast bronze, machined. Cast aluminum tender shell with bronze cast underframe. Cab formed, stamped sheet brass. Brass turned

O

and stamped fittings. 2-rail insulated. Motor was not normally supplied with kit. Takes down to 36" min. radius. Mfd. in USA by Hines Lines, Detroit, Mich., during late 1940-early 1950 period. Firm is no longer

HINES LINES

in business. For replacement parts, see catalogs of All-Nation, Kemtron, other O gauge producers. Photo by Richard D. Fullerton.



SWITCHER

1900 vintage eight-coupled switcher. Boiler of sheet brass, formed, stamped, and turned. Driver diameter 50". Engine and tender length 13 1/4". Cast brass main frames. Die cast zamac fittings. For type tender trucks. Pittman AC or DC motor. Minimum radius

O

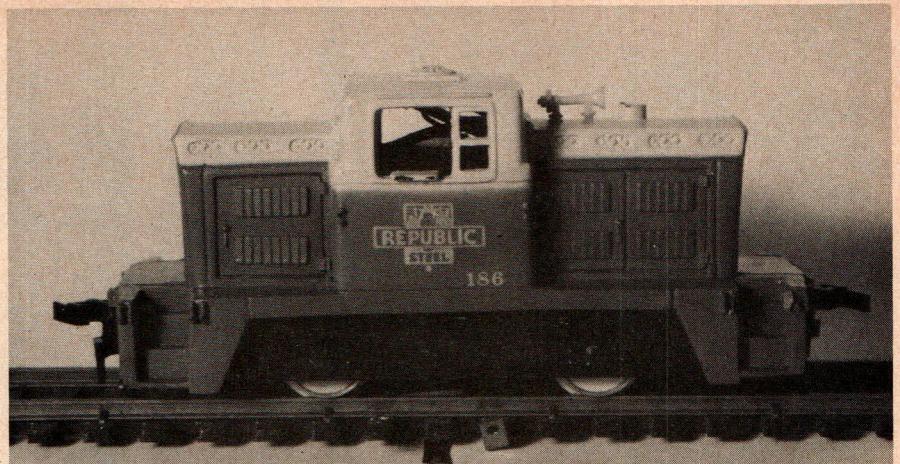
23". 24:1 gear ratio. Drivers steel rimmed. Catalog No. L-2001. Model basically identical with Cat. L-2000 Consolidation kit. Mfd. in late 1940s, through about 1955. Mfd. in USA by Thomas Industries, Shawnee, Oklahoma. Firm is no longer in train

THOMAS INDUSTRIES

manufacturing business. For replacement parts, consult catalogs of other current O scale loco producers. Photo by Richard D. Fullerton.

PLYMOUTH
MODEL CR-4 SWITCHER

Plymouth Model CR-4 Industrial 4-wheel switcher. Molded plastic and die cast construction. Mantua 5-pole permag motor with nylon worm gear drive. NMRA type couplers. Minimum radius 12" with short freight cars, less alone, 4-wheel drive, lighted. Model introduced 1960. Ready-to run only. Road names: T227A Republic Steel, T227B Union Pacific, T227C General Electric, T227D Westinghouse, T227E R.C.A., T227F U. S. Steel, T227G Bell Telephone, T227H Santa Fe. Mfd. in USA by Mantua Metal Products Co., Inc., Woodbury Heights, N.J. 08097. List price, August 1, 1966, \$7.98. For parts and repair, see any authorized Tyco dealer.

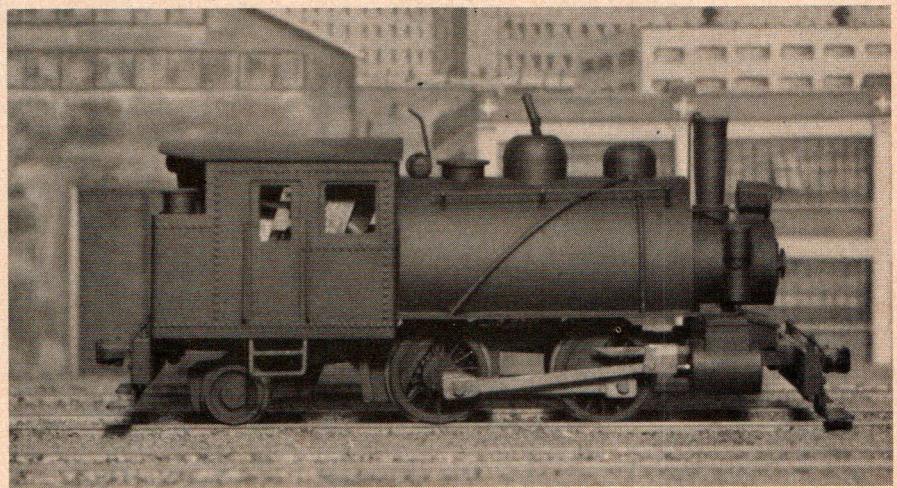


HO

TYCO

SADDLE TANK SWITCHER

Industrial saddle tank 0-4-2 switcher of built up sheet brass construction, stamped and formed. Brass turned and stamped fittings. Dummy AAR couplers. Minimum rec. radius with train, 24" Mfd. in USA by Great Western, North Hollywood, Calif., period of early 1950s. Firm no longer in train business. For replacement parts, consult catalogs of other O scale loco producers. Photo by Richard D. Fullerton.

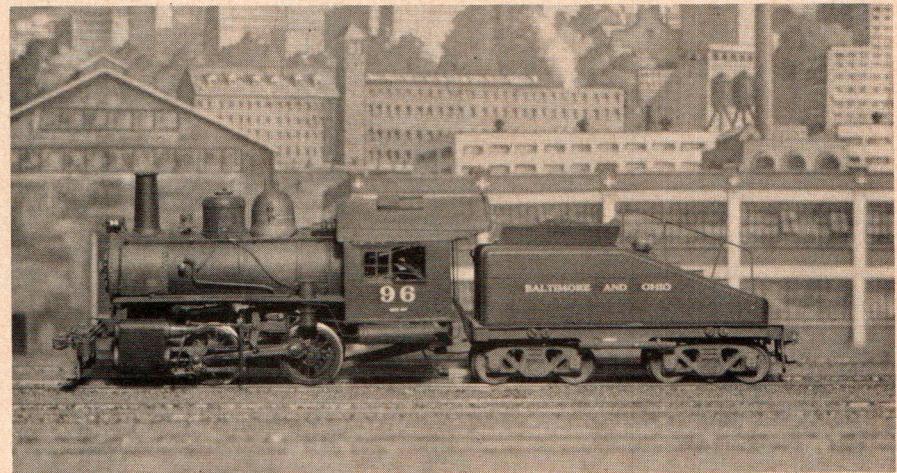


O

GREAT WESTERN

BALTIMORE & OHIO
CLASS C-16A

Baltimore & Ohio class C-16A waterfront switcher. Sheet brass construction with cast and turned fittings. Japanese AC-DC motor. Screwdriver construction. Operating headlights. Slopeback tender. Sprung tender trucks. Minimum radius under 24". Dummy cast AAR couplers. Brass drivers, worm, and gear. Lead weights provided. Optional kit or assembled. Mfd. in Japan for International Models, Inc. Firm is no longer in model railroad importing field. For replacement parts, consult catalogs of other current O scale locomotive producers. Loco was imported during late 1940, early 1950 period. Photo by Richard D. Fullerton.



O

INTERNATIONAL

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36 In 1939 Electro-Motive took a stretched out switcher body, put it on road diesel trucks, added steam heating, and created EMD's first road switcher.

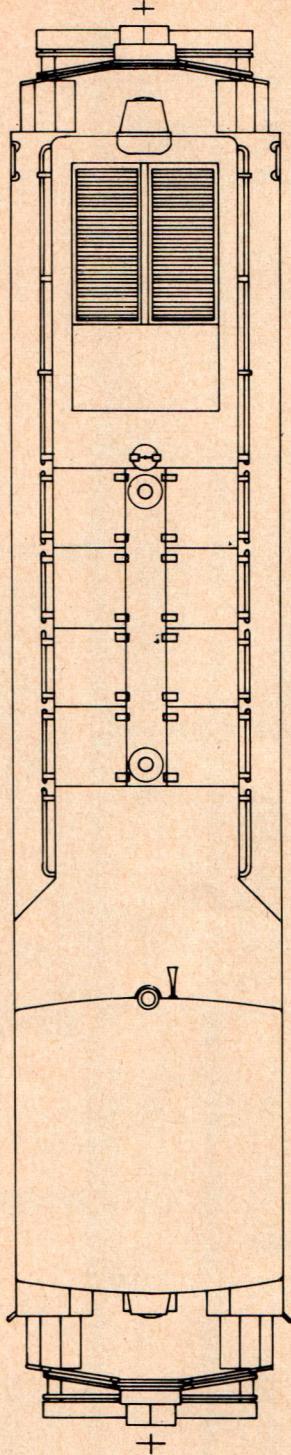
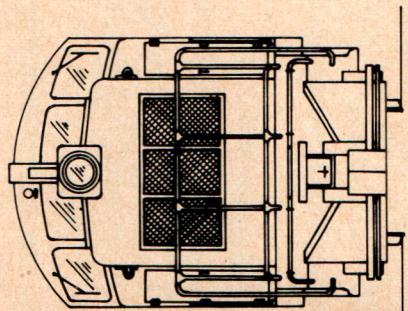
drawn by Larry Jackman

Electro-Motive's switcher line possibly gave rise to the old steam fan slogan that "all diesels look alike". Basic characteristics of EMD's switcher design have remained unchanged over a 30 year period. Some understanding of the model designations helps the railroader understand one model from another, and how the lines developed. The first model to be built at the new EMD plant at LaGrange, Illinois, was a series SC switcher of 600 hp. The other early switcher was rated

at 900 hp. and was termed NC. Also available in those early years were a model SW and NW. The letter S designated an abbreviated Six for 600 hp., and the N stood for Nine or 900 hp. C or W indicated a cast or welded frame.

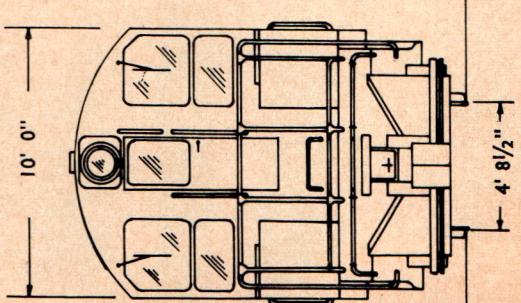
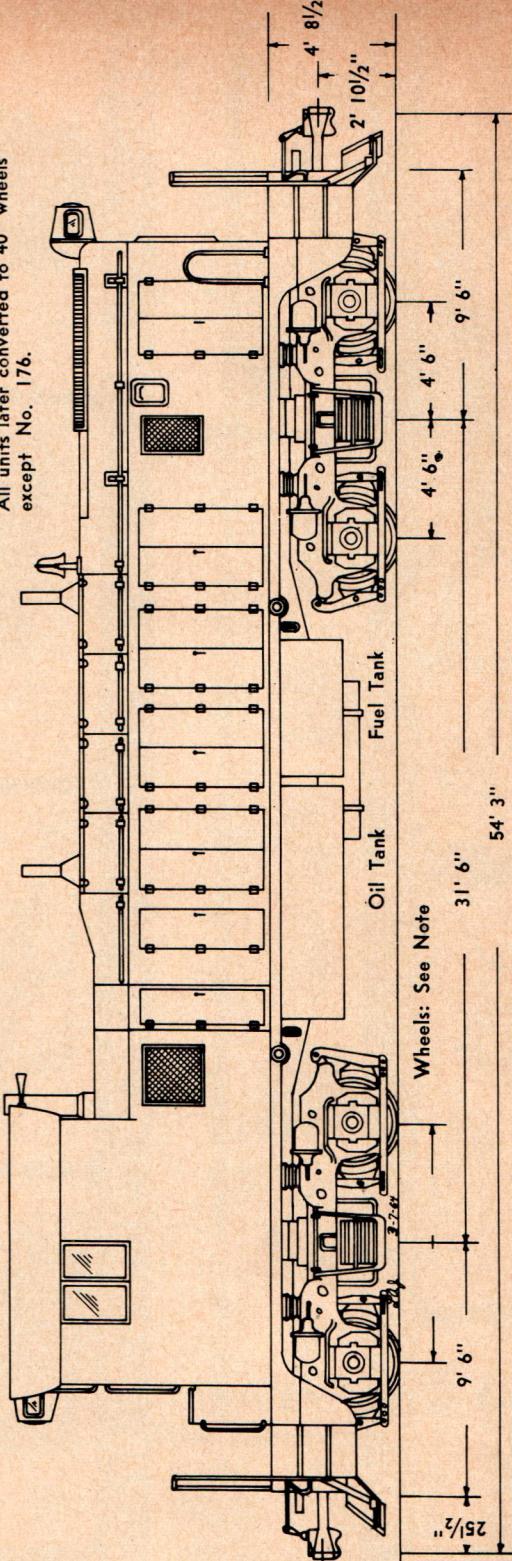
About the same time that Electro-

Motive introduced the 1350 hp. FT road diesel, they also produced the first of seven class NW-3 road switchers mounted on FT trucks. The NW designation had, with delivery of some NW-2 switchers of 1000 hp.



ELECTRO-MOTIVE NW-3 1000 HP. - 1939

NOTE: Locos were delivered with 38" Wheels.
All units later converted to 40" wheels
except No. 176.



lost its original meaning. Model NW-3 used many 1000 hp. switcher components on a stretched out frame, to create Electro-Motive's first road switcher. The FT trucks provided the smoother riding required at road speeds. A steam generator permitted use of the NW-3 in local or commuter type service.

Plans for the 1939 vintage NW-4

built for the Missouri Pacific, and

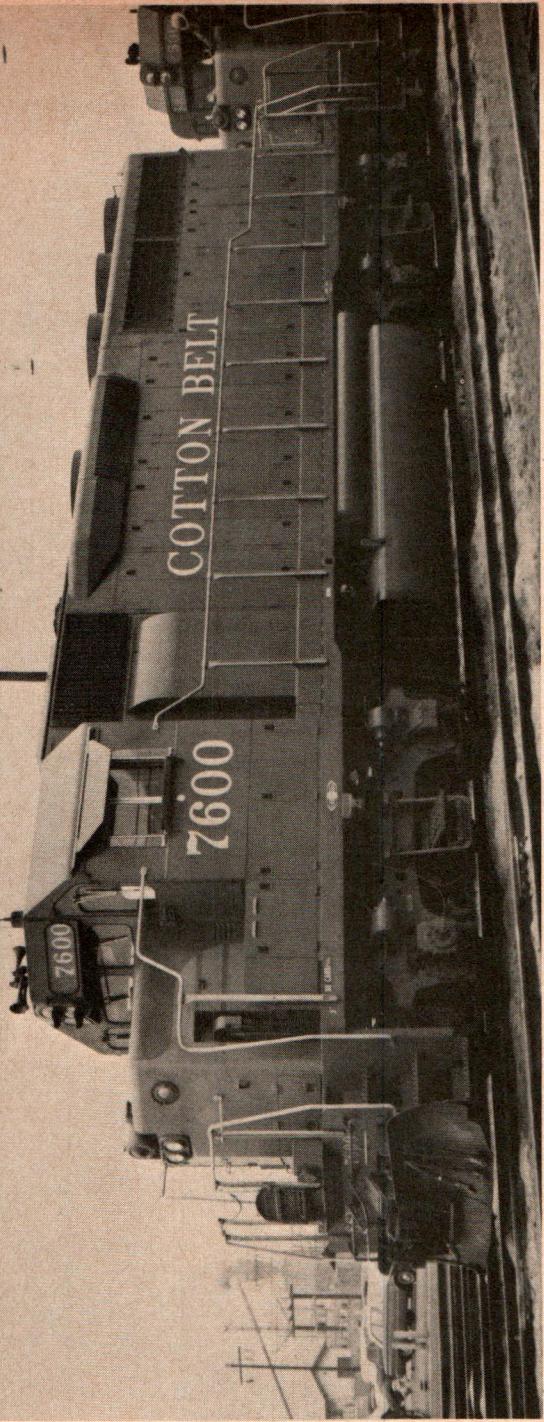
the 1946 version NW-5 have appeared

previously in RMC and are reprinted

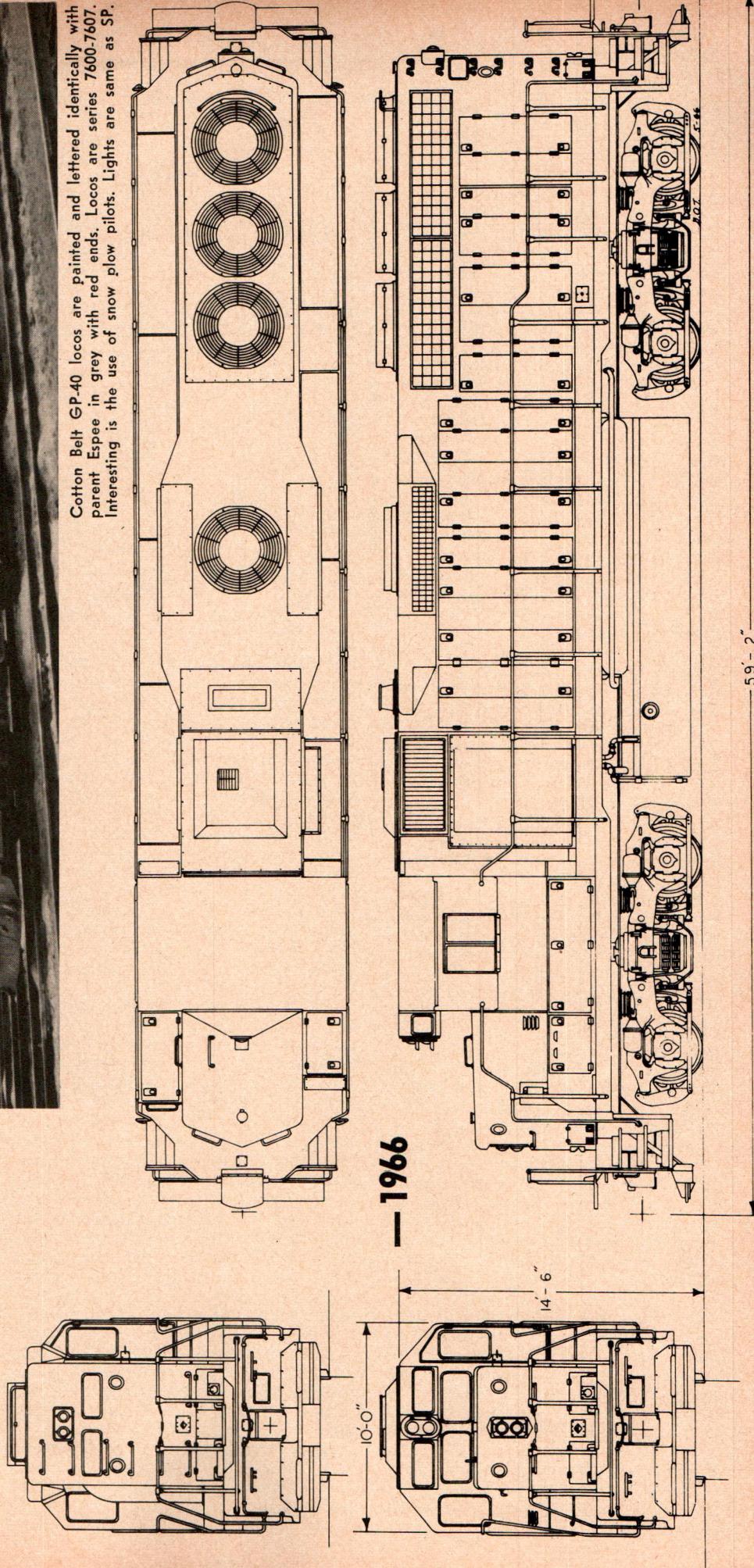
in Loco 1—The Diesel.

EMD GP-40 3000 HP.

ELECTRO-MOTIVE's GP-40, one of a series of locomotives introduced new in 1966, is equipped with the 645 series V-16 diesel engine rated at 3000 hp. The locomotive also features the EMD AR-10 AC-DC generator which replaced the DC generator used in earlier EMD locomotives. The development story behind the new 1966 EMD line was described in the August 1966 issue of Railroad Model Craftsman.



Cotton Belt GP-40 locos are painted and lettered identically with Parent Espee in grey with red ends. Locos are series 7600-7607. Interesting is the use of snow plow pilots. Lights are same as SP.



Cape May, Delaware Bay & Cookes Point Ry.

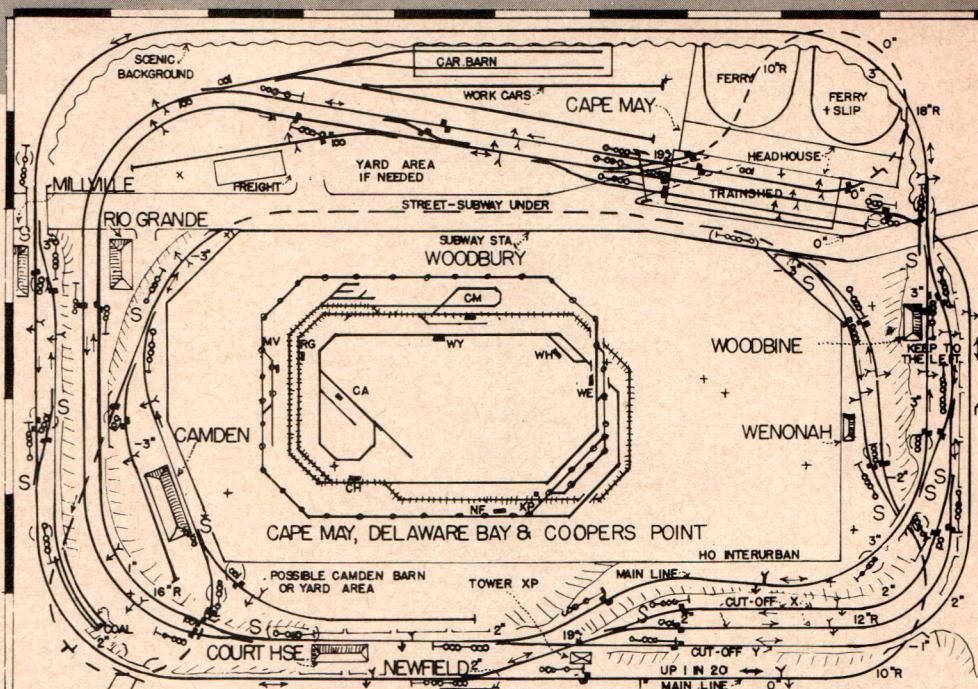
by the layout doctor

AS WE have pointed out on previous occasions, an interurban or street railway line, is single track railroading in microcosm, since only single car trains are run, two or three cars at most, so that sidings can be shorter and terminals less pretentious. From a modeler's viewpoint, and excepting special situations such as end of line loops, the difference between a trolley line (without its overhead wire) and a steam type railroad is negligible or non-existent. Of course, curves are usually wider so that a steam version of CMDB&CP would take up somewhat more room. Yet an all diesel switcher version of the CMDB&CP could duplicate the plan exactly, since a number of one-time trolley lines went diesel.

With that in mind, I present here just such a layout in HO to fit a space 7'0" x 10'2", with operation from an internal operating space. It's called the Cape May, Delaware Bay, and Coopers Point (a slight switch on a long gone prototype car line name) and represents, anachronistically, an interurban connecting the new Delaware Bay ferry connection with Camden, N. J., where there would also have been a ferry connection with Philadelphia. At one time there was an electric line from Camden to Millville, operated by the West Jersey & Seashore part of the P.R.R. with steam trackage continuing via Woodbine and Cape May Court House to Cape May. All of this, less some abandoned trackage, is now part of the P-RSL and operated by diesel.

The name, to be sure, is merely a convenient handle. It had to connect a real or former ferry terminal with some point of importance, for electric lines very often did just that, across the river or bay from any Metropolis from Boston to San Francisco. Matter of fact I started to call the interurban the Pacific Northwestern and had it connecting Sausalito with Eureka (Calif.). But having a subway station at Willits seemed a bit more to swallow than having such a station at Woodbury, just within the realm of being reasonable, and not by much, either. If you build such a line you will naturally rename and relocate it to suit your own particular interests.

Curves on the interurban have been kept to a 10" minimum, with other curves at 12", 14", and 16" radius up to a desirable 18". All the switches have 18" radius curves so that Snap-Switches could be used although track divisions for these or for sectional track on the 18" R or straightaways are not shown. Tru-Switches could also be used where manual or electrical control was implied by the lack of an "S" which



indicates spring switch. If overhead wire was used as a power source, then even regular all-rail frog switches, suitably sprung, could be used at spring switch points as well as non-sprung switches. But for spring switches in two rail, only insulated frog switches (such as Snap-Switches) can be used. And by the way, if you like to make your own switches, you can rip Snap-Switches apart so as to utilize frogs and points, mounting them on wooden, fibre, or other roadbeds. The 19° crossings suggested at two points are also available commercially, either fully insulated or all-rail-frog, if you don't want to make them.

At Cape May there is a reverse loop (optional of course) which crosses the outbound track and swings around under the dummy ferry slips and the dummy superstructure of a ferry boat. This presents the car on the innermost track, ready for an outbound run. In times of great traffic, the other two tracks can also be used for holding outbound (or inbound, for that matter) cars. Exit from any of these tracks is controlled by a three-track signal bridge located just outside the terminal and spanning, also, the vehicle entrance road to the ferry slip. For that reason, the inner track has also a dwarf signal just clear of the road, under the trainshed, repeating indication of the bridge signal outside. There is a freight house located on the inbound track, normally backed into by the interurban road's freight motors.

Double track (as so often the case with interurbans and standard railroads) runs out a ways from the terminal, here through Rio Grande to Court House; full name, Cape May

Court House. The end of double track could mark the end of a local service out of Cape May, with quick turnarounds to keep cars out of the way of other traffic. Single track extends from Court House to Woodbine where there is a strange keep-to-the-left passing track, with spring switches. The reason for keeping to the left will be explained later. This and other passing tracks could hold a maximum of two long interurban cars. Of course one car could stay on the siding while a "long" freight or passenger train ran by on the other part of the siding.

From Woodbine, a long single track runs along behind a scenic background to Millville, where there is another sprung passing track. The background should be high enough to conceal the existence of a track behind it: since that track is 3" above the ground there, another 3 or 4 inches would be needed to conceal overhead wire, making an optimum background height of 7". Single track runs from Millville to Newfield and then drops down a steep grade to negative elevations, -2" to -3" through Wenonah, and at the latter elevation through the Woodbury subway (!) to Camden where cars round a reverse loop under upper trackage to enter the station ready to head right out again.

There is one storage spur behind Camden station, plus a "yard" spur with sprung switch on the other side of the station. There is space, however for more of a yard or barn if desired. Similarly at Cape May, there is space for a yard if more freight service is to be operated.

So far I have described a pretty straightforward single track, point to,

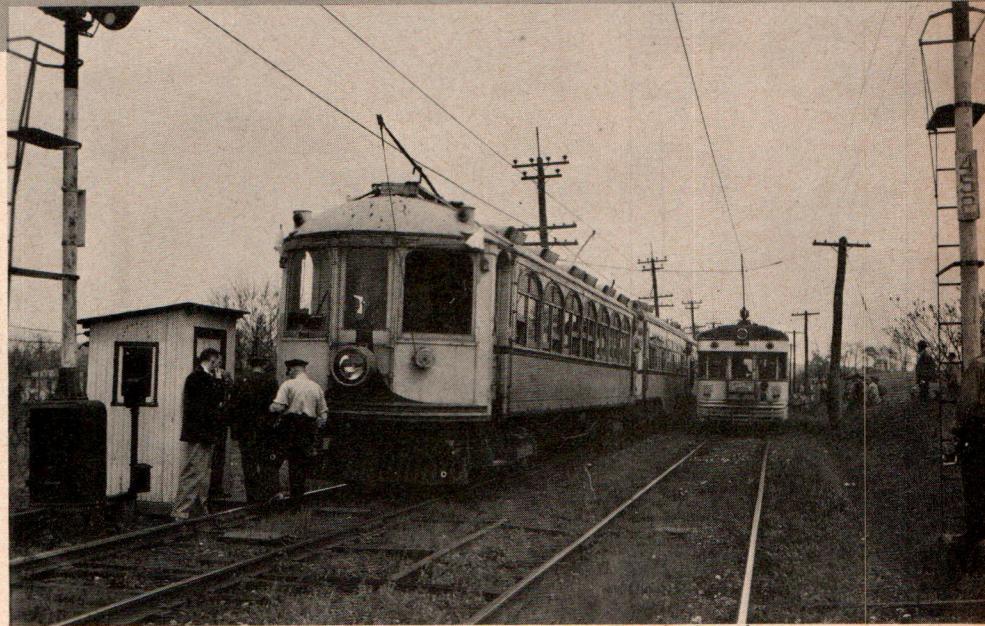
The interurban railway is single track railroading in microcosm, with sidings being shorter, terminals less pretentious, and trains usually three cars or less. This layout doctor design packs in plenty of operation plus a ferry terminal. With some track simplification, the same design could also be used in the same space for 0 gauge.

point operation. You could keep four or five interurbans running on this layout with the passing tracks, double trackage, and reverse loops, and maybe more. But a point to point layout is vastly improved by the addition of "cut-offs" or "sneak-offs" or "hidden connections" to permit continuous round-and-round running. I was able to add to the CMDB&CP two such cut-offs. The first is the reason for keeping to the left at Woodbine passing siding—the switch to the cut-off is on the track that keeping to the left, on the oval to be described, leads to. This oval or round-and-round run is Millville-Newfield-Woodbine-Millville etc. Because the Woodbine passing track is not used for passing when this run is in operation, I have had to install a standard keep-to-the-right passing track on the "cut-off X" between Woodbine and Newfield.

Another continuous run oval can be made by extending one of the Cape May terminal tracks, as I have done, under the main line, up-hill via "cut-off Y" to Court House. This gives a continuous run as follows: Cape May-Rio Grande-Court House-Cape May etc. It has one long section of double track and no other passing tracks, but two cars could be run in opposite directions when continuous running was desired, just as two could run on the previously described "oval."

The two "cut-offs" cross on the level at 19° crossing at Tower XP. It has occurred to me that if this crossing were replaced by a double slip-switch (such as Fleischmann's if you want to buy one R-T-R) a greater variety of operation would be possible. You might like to work this out: actually, it boggles me.

Now I have shown all over the layout, many, many sets of two insulated rail joiners by black blocks, as well as track feeders by means of the standard arrow-heads and -tails (with those to reversing sections just lines, without the heads and tails). This means that if the road were to be operated by 2-rail, a rather large control panel would be required, with at least on-off control for each such sections, which are so numerous I did not letter them. It is probable that some form of cab control would be desirable, with eventually a version of automatic control. While I could draw this up for you, off the top of my head so to speak, it would be of little use to you without an elaborate explanation, requiring at least another article. For any automatic control circuit, signal circuit, etc. YOU should understand what it is all about and design and build it yourself, otherwise troubleshooting—when required—will become onerous.



Lehigh Valley Transit three car railfan special in the hole for a regular train in a Hal Carstens photograph. A ride in the rear lounge seat of Cincinnati lightweight No. 1030 was a thrill to be remembered for a lifetime by any traveler.

My own preference for an interurban would be to run from overhead wire. Thus the two running rails would both be grounded or, alternately, one could be grounded with the other used to operate signal and control relays by a fairly simple and foolproof system. Hanging overhead trolley wire is not at all as hard as it sounds and if I move house soon, as hoped for, I'm going to build an overhead trolley system again and photograph and write it up to show how easy it is. IF you do install overhead trolley, my suggestion would be to have NO insulated rail joints, but to make all insulated breaks in the overhead system. These are simple to do and, in addition, can be moved as desired just by rehanging a few feet or yards of trolley wire. The trolley wire cannot be continuous anyhow, so my recommendation is to hang it in three, four, or five foot lengths, connected by insulators, wire contactors (for signals and switches), wire-frogs, and plain splices. Insulators would then be located in the overhead approximately where the twin insulated rail joiners are shown on the plan.

I have also shown, again, three-color light signaling, if you want to add it—or at least have the signal masts, not wired, at approximately the right places. In this I had the assistance of my son, Walter, who is more familiar with railroad signals and operation, where spring switches can be turned manual for contrary movements. He had me put in signals on the single track ahead of each passing track, as well as dwarf signals on each passing track for possible move-

ments out of the sidings from the "wrong" track.

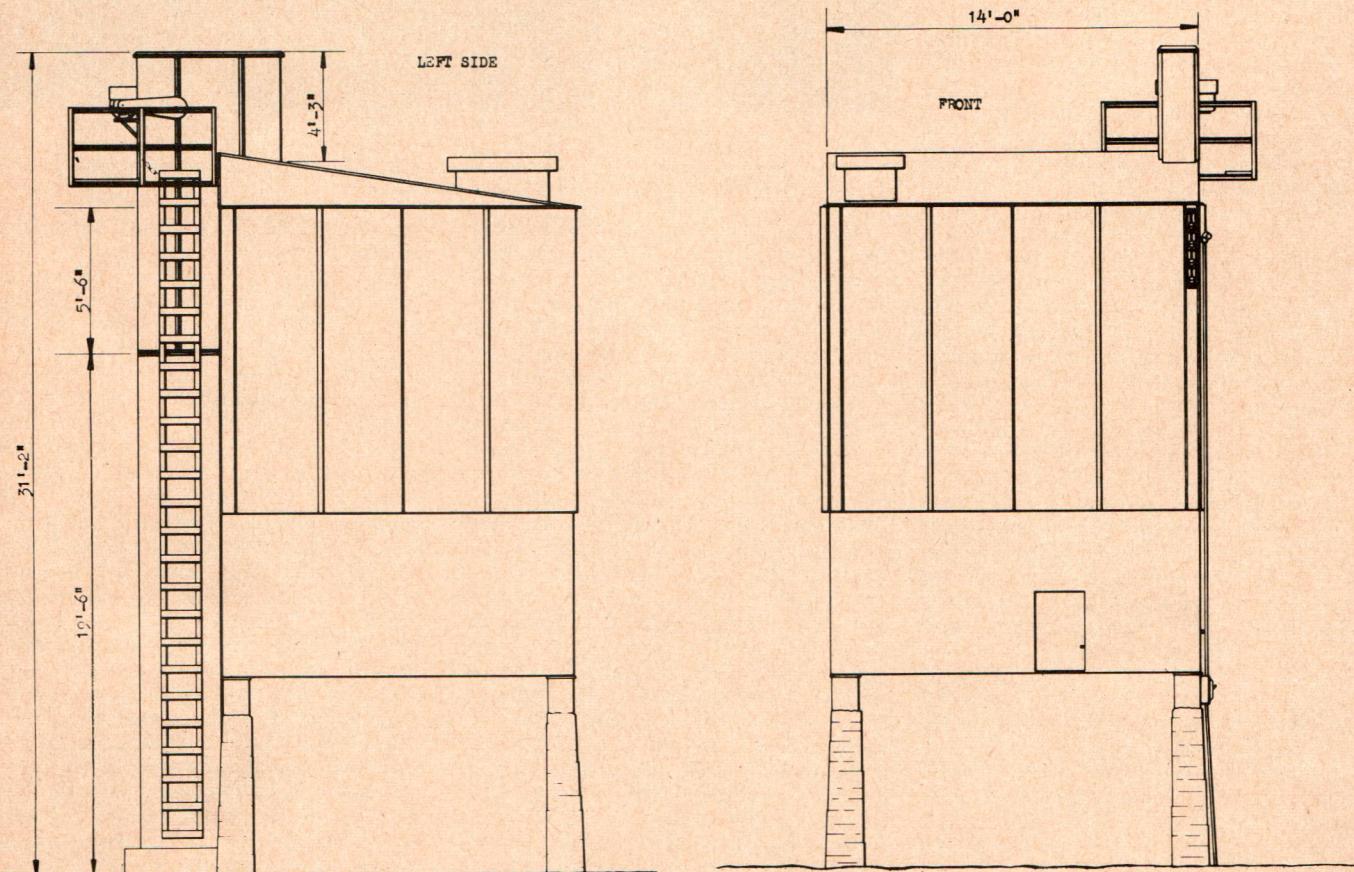
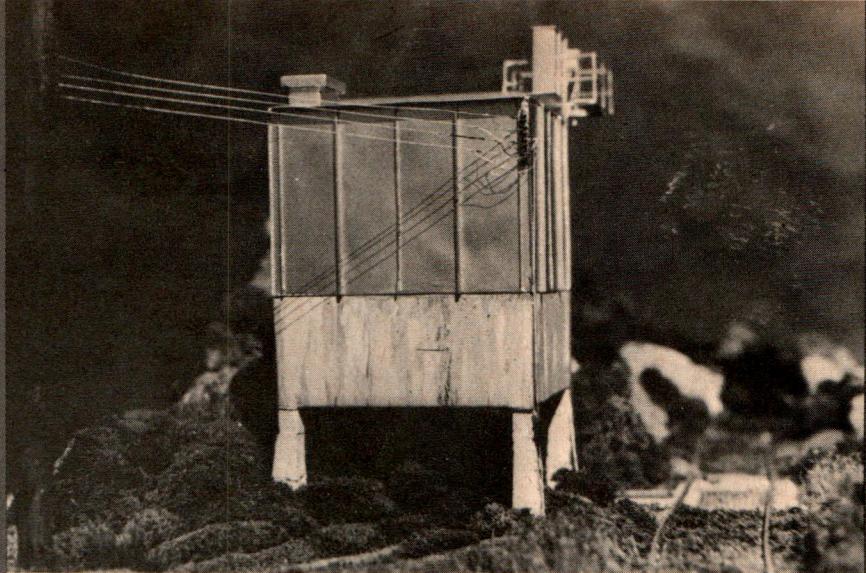
Of course one of the charms of running a model interurban or trolley line is that you can have spring switches which do not need any controls. While they could be there in theory, they would not be there in practice. A quick count shows me twelve spring switches on the Cape May, Delaware Bay, and Coopers Point, all fairly important, yet none needing controls reserved for secondary switches. At loss of some flexibility in operation, quite a few more switches could be sprung. I have, accordingly, indicated the signals and dwarf signals that would not be needed with spring - switches - strictly - sprung - not - manual operation in parentheses. A couple of other signals which would not be visible to spectators because of their locations, have also been parenthesized. And, by the way, if you don't put up any signals, even dummy ones, you are running trains (a) by cab signals—unlikely on an interurban; (b) timetable and train orders; (c) by manual block—call up dispatcher from every siding and junction.

A schematic diagram of the whole interurban is given in the center of the drawing. On this, I have marked one of the continuous runs, via Cape May with cross-hatching, the other, via Millville with little circles.

One of these days I want to take the general layout idea of this interurban and put it in steam railroad form. Wonder how much more space it will take with larger radius curves, gentler switches, and more elaborate terminals? ■

CEMENT STORAGE PLANT

by Dale Bartholomew



INDUSTRIES are an important asset to all railroads. The roads having the greatest number along their right-of-way are generally the richest. Model railroads also need many industries to indicate a purpose for their existence and to provide for plenty of switching action. Factories, mills, and other car load producers are quite often large and cannot be reproduced in the limited space available to modelers; thus, the ideal industries for modeling purposes are those that take up a small area but produce a high number of car loadings. Presented with this article are

plans for a cement storage plant that can be packed into a prototype area of 20'x30' while providing a spotting position for one or two covered hoppers, plus reason for several traveling out on the road.

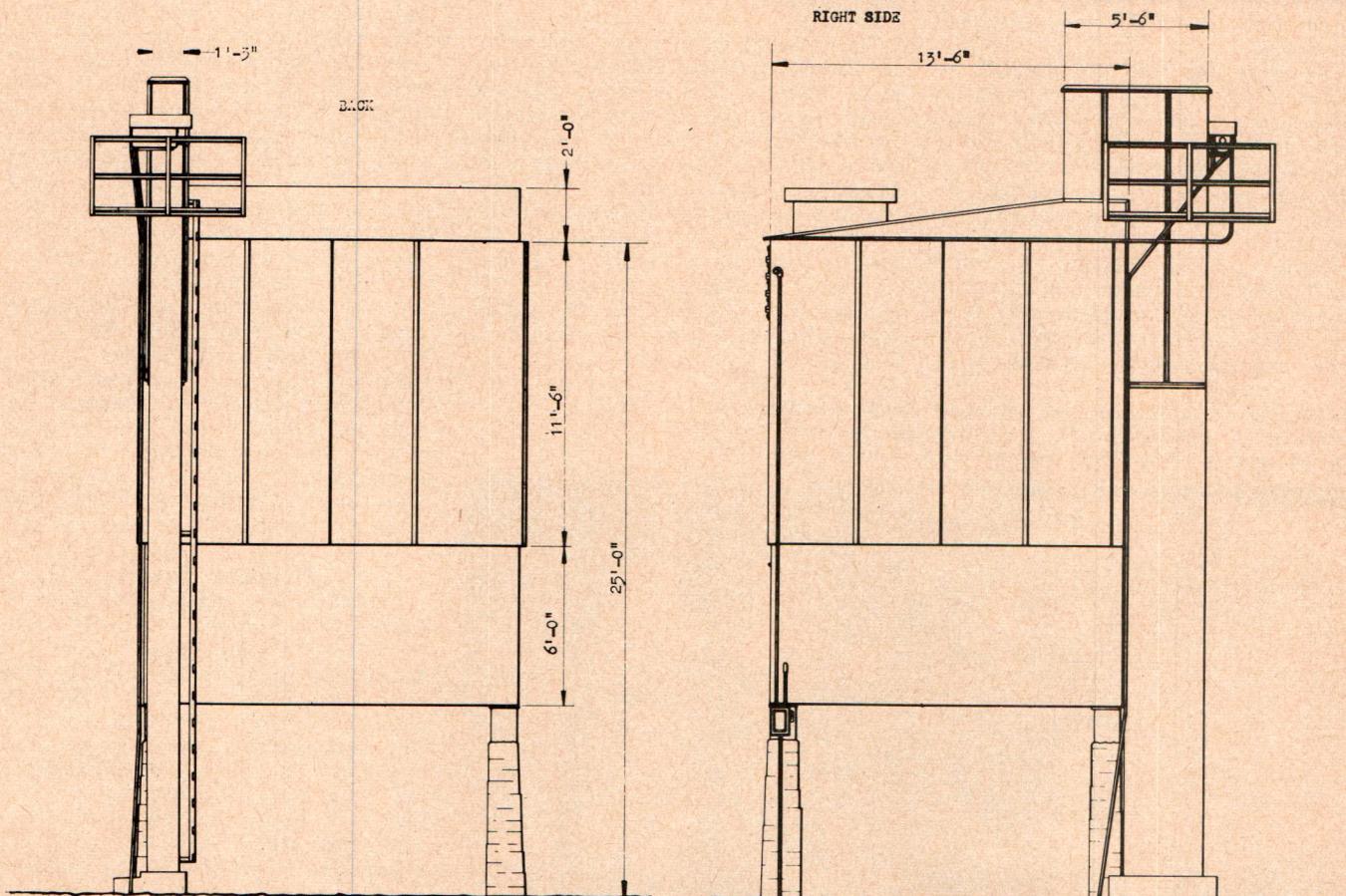
A photograph of this plant was found in a magazine with no other information provided except an east coast location. The plans, therefore, were produced from the information shown on the photograph using a method known to draftsmen as perspective drafting; but in a reversed procedure. The plans may vary slightly from the actual prototype dimen-

sions for this reason but in general should be quite accurate.

For reference purposes, I have split the plant into four sections: the *bottom section*, consisting of the four corner legs; a *central section* with a smooth but dirt-streaked exterior; the large sheet-metal covered *top section*; and the *roof*. The naming of front, back, and sides is purely arbitrary, but useful by way of description. Since the back of the structure cannot be seen, it is assumed in the plans that the construction is similar to that used on the rest of the bin. The only additional item was a ladder to

The author built his O scale model in brass but wood shapes would also make a fine replica. Plans are shown full size for HO.

Front and back views of the author's cement plant model show its relative simplicity. Author built his model from brass and Special Shapes strips and angles. Model could also be made using wood shapes from Northeastern. Legs are of plaster.



allow a person to reach the catwalk at the top of the elevator tower. This was made of wood construction for the simple reason that wooden ladders are easier to model; however, a metal version may be substituted at the discretion of the modeler. Dimensions are, in general, given to prototype lengths for the ease of modelers in all scales, with the exception that material thicknesses and sizes are those required for an "O" scale model. Half these values for "HO" scale. The construction material used was brass, but others could be substituted.

Construction

I started the construction of my model by cutting out the eight main side panels of the top section from .010-inch sheet brass, the easiest method for making these panels is to cut a strip of brass or other construction material to the 11'6" height, then mark and cut each section to width one at a time since the saw thickness wastes a slight amount of material. I suggest you number the sections and plans correspondingly. Figure 1 illustrates a suggested framing procedure. The channels at both edges of the front and back edge of the left and right sides are partly

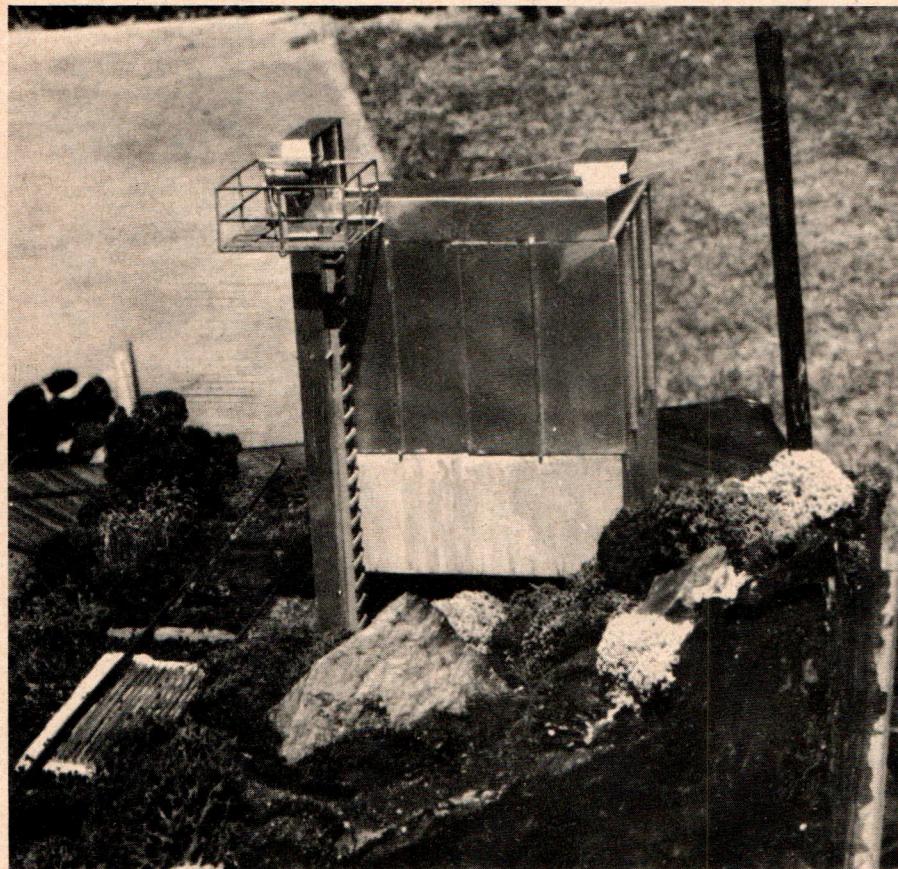
formed from the side plates of the adjacent wall (N on Figure 1). This leaves an ell 6"x2" which must be made to form the remainder of the channel. Cut and shape these from the same strip of .010 brass as was used for the side panels. Save these pieces. Cut and shape four ell's of 6"x2½" dimensions from .006-inch sheet brass. These will form the reinforcing edge at the center of each side. Pick one of the main side panel sections for each side and solder this ell flush with one edge.

A skeleton frame must be made to support the main side panels. To begin

I suggest using two channels of brass shapes of some kind, with their length a little longer than the width of the front. File a notch deep enough and long enough in each to clear the center ell. Solder one of these channels near the top and one near the bottom of one of the front panel sections. Butt the next section to the first and solder it in place. Make sure that they are straight and even at the top and bottom. This forms most of the front wall which is facing down in Figure 1. You may want to solder a smaller angle or channel vertically between the two skeletal frame channels toward the edges of the larger sections to keep them from warping (M on Figure 1). Use whatever scraps you have available. Fasten in place the two 6"x2" ells at the ends with the 2-inch ell next to the side plate as at N. With your razor saw cut the skeletal frame channels flush with the ends of the assembly you now have, as shown.

To begin the side framing lay the front face down on a flat surface and solder one of the side panel sections at a right angle to the front plates. The flat surface will aid in preventing the side section from protruding farther than the 2" leg of the ells. The ell and the side plate form the end reinforcing channel of the bin (see N on Figure 1). Fashion two right triangle braces of .016-inch sheet brass and solder flush in the corner to insure that the side is at a right angle

Author's model is built on a movable scenic block, permitting easy installation or removal from a layout. Prototype had metal ladder as compared to wooden type used by author in his O scale model.



to the front. Cut two more skeletal frame channels, file to clear the center ell, and solder to the side panel section already in place. For strength, fasten these flush with the channels of the front section and solder to the right triangle braces. Make sure the frame channels will extend past the end of that side. Solder the next side panel section flush to that already there, then the 6"x2" ell to that. Solder in cross channels if needed to prevent warpage, as you did on the front at M. Cut the skeletal frame channels flush with the end of the side wall that you have now. Repeat the procedure for the opposite side. For strength at this point in the construction it might be necessary to solder a reinforcing channel between the two sides toward the loose ends to insure that they are parallel to each other. This brace is shown in the photograph of the partially completed structure.

To form the back, solder two skeletal frame channels between the two sides flush with the ends. Put one near the top and one near the bottom as was done for the front and sides. Solder the back panels on these cross channels. Leave a crack 1'-3" wide for the elevator tower to slide into.

The eight heavier side braces can be cut to 11'-6" from Special Shapes Co. brass 1/16"x1/32" flat bar for "O" gauge, or 1/32"x1/64" for HO gauge. Solder these in place on each main side panel.

The Central Section

Cut three pieces of .016-inch sheet brass to form the left, right, and back sides of the central sections of the bin. Make these about 1/16" higher than shown on the plans. No notch is necessary in the back for the elevator tower in this section. Slide these under the top section, the 1/16", and solder in place. Solder along the corner where the sides meet. It may be necessary to place an angle in the corner for strength and to provide a soldering surface. Fill the cracks and file smooth. To form the front with its recessed door, cut another piece of .016-inch sheet brass the same height as the others but with a length equal to the distance from the left side of the bin to the right side of the door. Cut out a rectangular notch the shape of the door in this piece. Cut another piece of sheet brass to form the remainder of the front section. To join these two plates, fashion another strip of sheet brass the same height as the others and about 1/2" wider (for "O" gauge) than the door opening. Solder this plate to the back of the first front panel formed in such a way as to leave 1/4" extending to the right past what will be the right edge of the door. This provides a splice plate to solder the right front panel section to, and also a backing plate for the door. Solder in place the right front panel and fill in the cracks above and below the space left for the door. Sand the surface smooth. Cut a piece of .006-inch sheet brass to the rectangular shape of the door and sweat to the backing plate to form the door proper. Solder this assembly to the rest of the model. Make sure all sides are straight and that the bin will sit flat when set upright.

Elevator Tower

I continued by making the elevator tower. This extends vertically from the pit to a point 31'-0" from the ground, at the back of the bin. The sides were formed in two main segments. The first or lower segment runs from the pit up to the horizontal brace, or 19'-6". Part of this length will extend into the concrete pit. The width of these side pieces is 3'-1". Form both sides from .010-inch sheet brass. The sides of the top segment were made in the form of a rectangle, 11'-6"x5'-6" from the same thickness of sheet brass. Cut a notch in these to clear the channel skeletal frame of the top section of the bin. Solder these two side segments of the tower together with a splice plate behind them. To form a surface to solder the end or back wall plates of the tower to, cut eight pieces of rail material to a length equal to the inside spacing of the elevator tower sides or 1'3" minus the thickness of the side plates. These will also act as spacer blocks between the two side walls. Solder four of these along the back wall of the tower .010 of an inch in from the back edge of the sides, .010 of an inch in from the front edge of the visible

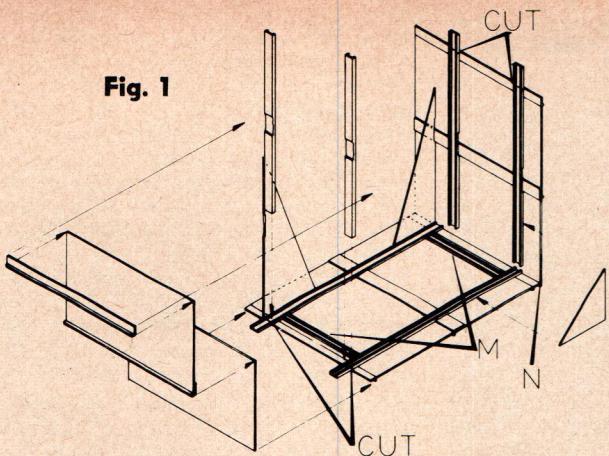


Fig. 2

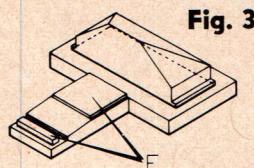
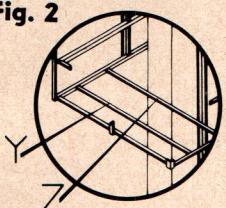
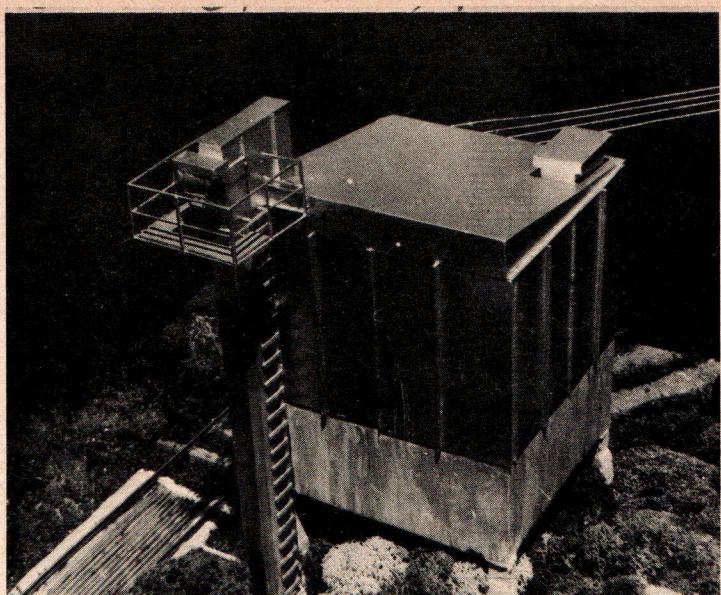


Fig. 3



rectangular top segment, and two .010 of an inch in along the visible lower front segment.

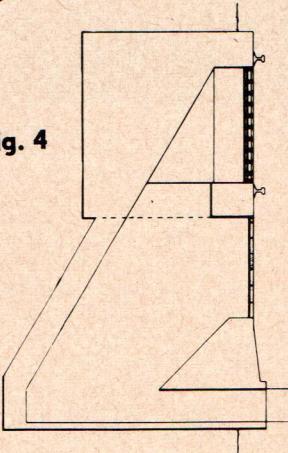
Cut three strips of .010-inch sheet brass to a width equal to the lengths of rail used. One of these is to be 31'-0" long to form the back wall of the tower. The other two for the front of the tower should be just long enough to cover the visible surfaces. Solder these strips in place to the rails, fill the cracks, and file smooth. Lay the tower assembly aside temporarily.

Roof

Cut and solder two Special Shapes Co. 1/16-inch ells to the top of the bin on the left and right sides with one leg of the ell protruding over the face of the bin. Shape the sloping right side of the roof from a piece of .016-inch sheet brass, adding an extra 1/16 of an inch to slide below the wall of the bin. Cut a rectangle 2'-6" by 1'-9" from .016-inch sheet brass. Solder this to the back of the roof side just formed flush with the top and back edges. This will act as a filler plate between the right side of the roof and the elevator tower. Fasten this assembly in place at the top of the right side. The excess 1/16" provides a soldering surface. Insert the conveyor tower in the notch provided and solder in place keeping all parts aligned properly. Cut and solder in place the left and back sides of the roof. Do not forget the extra 1/16 of an inch in height. Cut a sheet of .010-inch brass 14'-0" wide to form the roof. Notch to fit around the elevator tower and solder in place. It might be necessary to solder angles to the roof sides to provide a soldering surface.

To begin the air vent, cut and shape two pieces of .010-inch sheet brass to form the left and right sides. Solder a Special Shape Co. 1/8-inch ell

Fig. 4



to the top and bottom edges to provide a soldering surface. Fasten these in place. Their position can be marked out lightly on the roof in advance. Next cut two plates from .010-inch brass to form the ends and solder them in place. The top, or lid, on the air vent was made from one piece of .010-inch sheet brass by first forming a rectangle with sides 6'x4'-6" in length. Cut out 6" squares from the corners and bend down the edges to form the 6" sides. Solder the corner cracks shut and sweat solder to the rest of the vent.

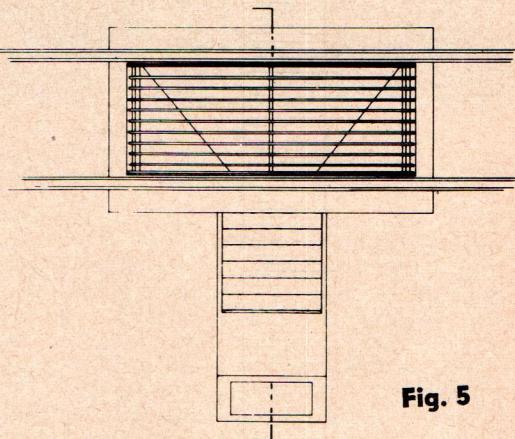
Looking ahead, I felt it would be easiest to model the bottom section, or the legs of the bin, from plaster. To serve as reinforcement for these legs solder a 10" (5" for HO) piece of brass wire to each corner inside the bin. About 1/2" of this wire should be used to fasten with the 9 1/2" remainder hanging down out of the bottom. The bottom plate can be fastened to the bin in several different ways. I cut out a plate 1/8" larger than the bin on each side. This excess was then bent up to form a soldering surface. Cut a 1/4" square notch out of each corner of the plate to clear the four corner wires. Solder the bottom in place. To form the plates under each corner of the bin cut four pieces.

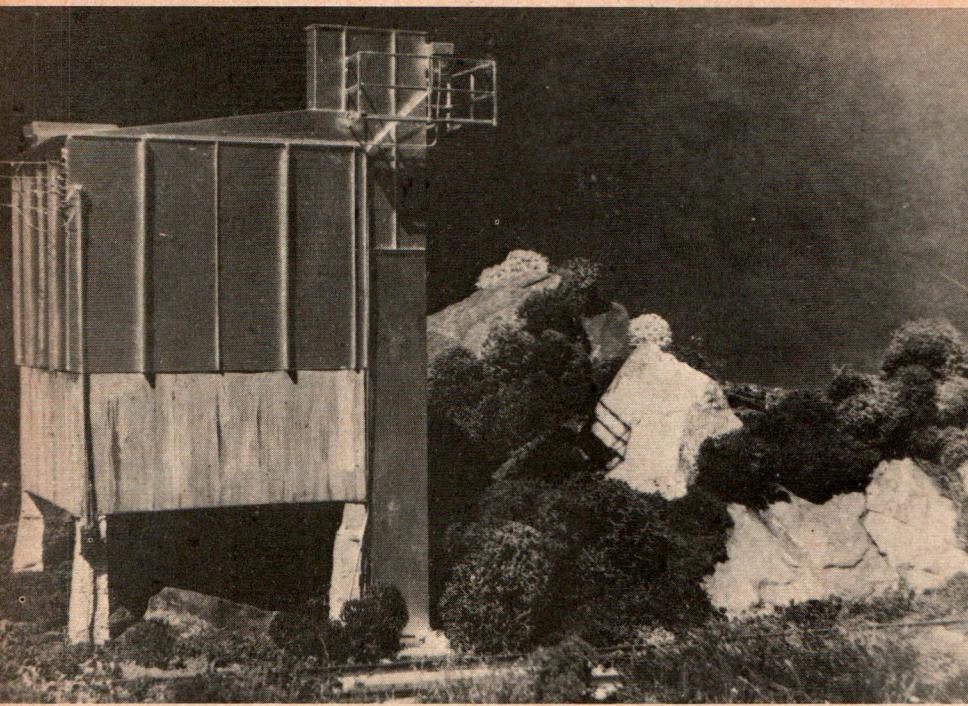
of .016-inch sheet brass into squares. These should have sides that are a little over one foot in length. Drill a hole in the center of each large enough to slide over the corner wires. Solder these in place on the bin with a slight amount of overhang over the exterior edges of the bin as is shown on the plans.

Continuing, we return to the elevator tower. Cut and solder in place the six ells on the tower sides (two vertical and one horizontal on each side). I made these from 1/32"x1/32" Special Shapes Co. brass angle stock for my "O" gauge model. Leave a notch for the belt guard in one angle on the left side. I made the motor in a drill press from a piece of brass bar. You may be able to use scraps or have one available. Fashion a motor platform and brace from .016-inch brass. Solder this and the motor in place. Finish the motor details by forming a cover from one piece of sheet brass by the same process as was used for the air vent cover. The belt guard can be made by using a double thickness of .016-inch sheet brass cut to shape. Form a rectangular piece of .016 sheet brass to serve as the top or roof of the tower. Solder all pieces in place.

Fashion the guard railing from the

Fig. 5





Closeup view shows the cast detail of the four plastic legs, each of which is different and requires home made molds. Legs could also be carved from blocks of balsa wood but would lose realism.

same angle material as was used on the sides of the tower. Use a light soldering gun and solder these pieces together as clean as possible. I made the top, middle, and bottom rails for all sides from one piece of angle stock with the corner and middle uprights soldered to these. Cut out the flange of the railing to 45° where the corners will be to allow for bending. Since the tower was heavy, it absorbed most of the heat causing some difficulty while soldering the light rail in place. For this reason some modelers may want to try gluing the rails in position. Cut two more angles the length of the railing on the back side. Solder one of these between the two bottom side rails and to the back of the tower as shown in Figure 2-Z. Solder the other toward the back of the railing as shown by Y. This will support the walk planking. Cut, shape and solder in place the two conduits leading to the motor. Make sure the one is long enough to extend into the ground. While you are at it, fashion and solder in place the short conduit that enters the switch box. This should extend about $\frac{1}{8}$ " past the bottom of the bin.

If you desire to add more electrical details, cut a piece of .016-inch sheet brass to make the backing plate or rack that the insulators for the power line are mounted on. Solder this in place. The rest of the insulator rack has basically three parts. These are the solid shaft that passes through the insulators, the insulators themselves, and the "U"-shaped brackets that hold the solid shaft to the backing plate. The solid shaft was formed from stiff piano wire, while the five "U" brackets were made of soft .010-inch copper wire. Make the "U"s of

sufficient length to pass through holes which are to be bored on each side of the backing plate. The insulators were made with beads. For ease of construction all these parts can be glued in place using Epoxy glue. To begin, fasten in place the top "U". Slide eight beads onto the piano wire and slip one end under the top "U". Fasten down the opposite end of the piano wire with the bottom "U". Glue in place the remaining "U"s leaving two beads between each.

Hook four pieces of fine copper wire that will form the power line around the piano wire and between each pair of beads. Loop this back around itself a short distance and twist together. Slide the beads and fine wire down to the bottom of each section between "U"s. Fill in the crack between each pair of beads to shape the insulators. Just let these wires dangle until the model is mounted and you can connect the ends to the pole. Cut a piece of stiff wire to form the conduit that brings the power from the insulator rack down to the switch box. Wrap four fine wires around the very end and solder, leaving a ball of solder to form the service head. Fasten this to the side of the bin. It also should extend about $\frac{1}{8}$ " below the bottom of the bin as does the shorter conduit.

The Bottom Section

The legs for my model, as stated before, are made of plaster. This proved to be a tricky operation, but as yet I know of no better method to form the legs with all their irregular detail. A separate mold was required for each leg. These I made from short strips of balsa wood. Since two sides of the legs are straight and two slope outward becoming wider toward the

bottom, two sides of the mold have to have each separate balsa strip cut a little longer than the one just above. One exception is the leg immediately in front of the elevator tower; however, it can be formed in the same manner as the others. I suggest using plastic glue to anchor the wood strips since when used on wood it becomes rubbery when dry. This allows the mold to be taken apart easily to remove the final casting with little damage. Form the legs a couple of feet longer than shown on the plans so that they can extend into the scenery below and be anchored. Pouring the plaster would not be much of a problem except that a piece of perfectly-straight and smooth piano wire must be placed through the center of the castings to form a hole for the anchoring wires hanging down from the bottom of the bin. The plaster must be thin when poured so that it will run to all parts of the mold. Insert the straight piano wire quickly after you pour the plaster. Tap the mold lightly at a solid point with a hammer to encourage the plaster to settle to all corners and to remove air bubbles. When the plaster is about 50% dry remove the piano wire leaving a hole through the entire length of the casting. Peel off the mold carefully and remove the leg when the plaster is completely dry.

It will be necessary to form a base to support the bin upon and to anchor the legs at the bottom. This can be made from almost any scraps you have available since it can be covered with your scenery material. I cut out a square from sheet brass about an inch wider than the bin on each side. Mark where the four corner legs will rest and drill holes for the reinforcing wires to pass through. I strengthened this plate with channel stock soldered around the four sides. Slide the four legs over the reinforcing wires, then slip the frame over and pull it down tight against the legs. Bend the wires over and solder them to the frame. This makes the model a complete and fairly rigid unit. I had a bit of trouble with the brittle legs breaking while attaching the base, but found that they could be glued back together with white glue. Once the base was cinched up tight and fastened, I had no further trouble.

Dump Pit

I had to guess as to what the dump pit's shape was, so my design is entirely free lance. Figure 3 shows what my pit looks like looking straight down from above. Figure 4 shows what a cutaway of the prototype might look like, but in modeling I casted only the portion that shows above the ground level. My casting is solid beneath the planking with a notch made just deep enough to accommodate the boards. Figure 5 shows a mold for the pit with the side forms removed. I made this mold from separate blocks of wood. The blocks marked "E" will form notches in the

finished casting for the board planking and for the lower end of the elevator tower to slip into. After the casting is dry if the thin edges around the planked area break away as they did for me, replace them with strips of wood. Fill the cracks with glue and smooth the wood so no grains show. It might be easier for you to make the pit entirely of wood.

My model and scenery is anchored to a portable mounting board with plaster holding most parts in place. Anchor the pit first. I leveled it on the board with a small level and then poured plaster all around it. Insert the bottom end of the elevator tower into the notch provided. It may be necessary to chip off part of the lower left-hand corner of the pit to clear the bin leg and base. True up the bin to the pit and pour plaster around the

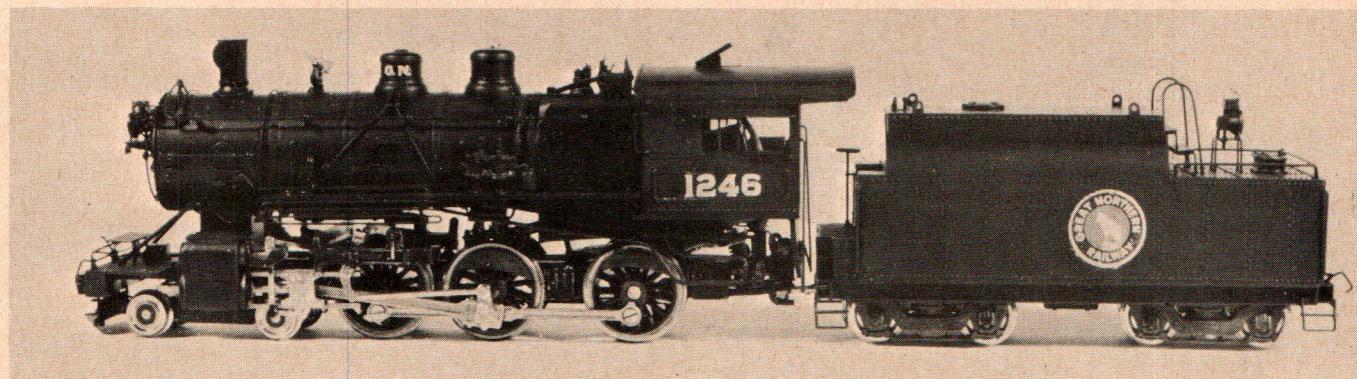
legs to anchor the bin in place.

Make a switch box from a piece of wood and two rectangular plates of .010-inch sheet brass. One plate should be smaller than the other with the smaller soldered symmetrically over the larger. Glue this brass lid to the block of wood. Drill holes in the wood for the two existing wires or conduits and one for the conduit extending out of the bottom to the ground. Fashion a switch handle from small diameter stiff wire and mount it on the side. Slide the box over the two upper conduits and glue it to the bin leg. Insert the conduit that extends to the ground and anchor with plaster at the base. This finishes the construction process.

Painting

I primed my model with Floquil's

primer, sanded it smooth, and sprayed it with Pactra silver paint. The center section was painted with dark and light grays streaked over the silver. The legs and dump pit were painted a dull off-white. Cut the boards for the planked area of the pit and paint them a light weathered-wood gray color. Fashion the pit grating from Special Shapes Co. 1/16" x 1/32" flat bar and paint it a rust color. To add realism, sprinkle the entire pit area with real cement. Construct, paint, and fasten in place the catwalk planking and elevator ladder. Finish the rest of the area with scenic material as you wish. Mount a power pole and string up your power line. You now have a compact industry all connected up and ready to go, just waiting for business and a visit from your railroad's covered hoppers.



Many modelers lament the lack of their favorite steam locomotives in readily available kit or brass import form. Regrettably, not everybody has as yet acquired a taste for the lesser known hogs of both the large and small railroads. Modelers wanting a Great Northern Ten-Wheeler, or a Southern Railway Mikado, or an Erie Decapod can't go out and buy one. The modeler, consequently is left with the choice of buying what is available, which may not always be his exact cup of tea, or of building his own.

Buying what is available and converting it to more nearly suit your needs is the best answer for most modelers. Hundreds of brass locos are or have been available during the past few years, and from this maze of boilers, cabs, mechanisms, tenders, and parts, can be created most of the

locomotives which we seek, in varying degrees of accuracy.

The photos shown on these pages are examples of a few recent cross builds, some more accurately modeled in reference to the prototype than others, but none currently available commercially.

The Chesapeake & Ohio Berkshire is such a simple conversion that it is ideally suited to the beginner, and adds another important loco to any C&O roster. The Southern Railway Ms4 is another relatively simple conversion but somewhat more expen-

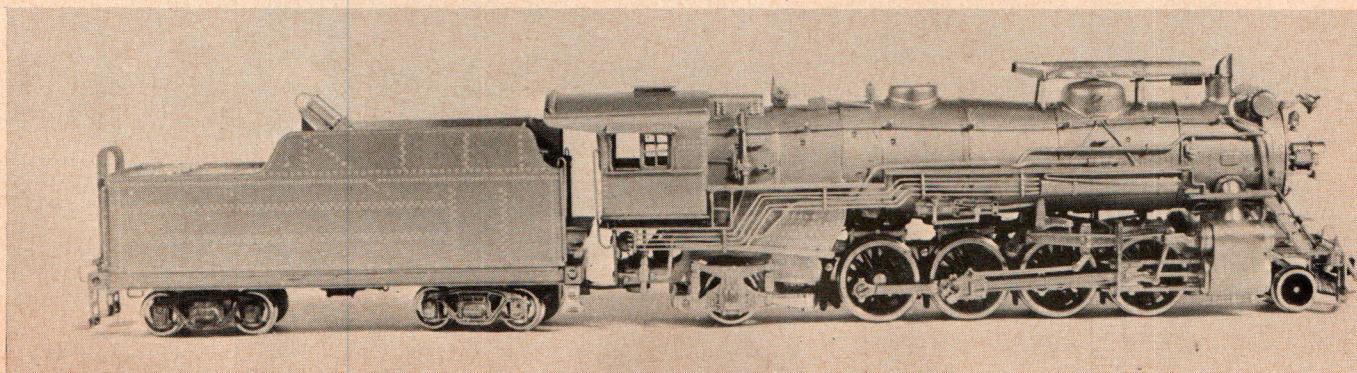
Great Northern 4-6-0 has superstructure, tender, and pilot from Tenshodo GN Consolidation, plus mechanism from a West Side SP T-31. Model created by following photos of the prototype loco.

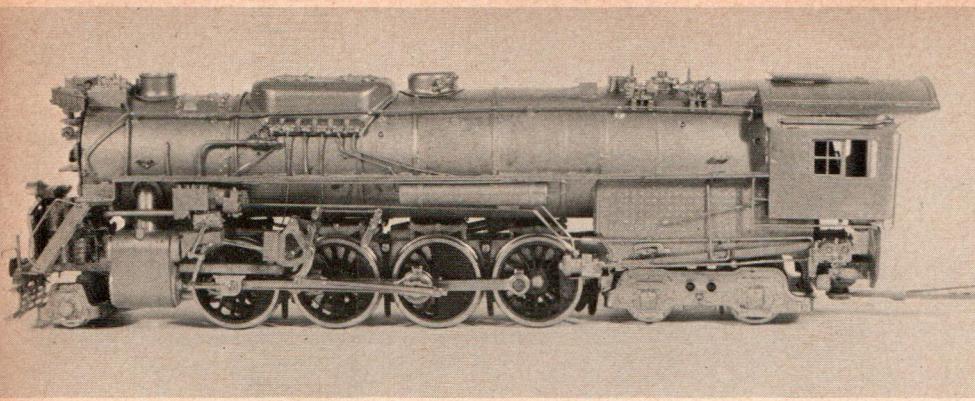
Locos You Can't Buy

by Bill Schopp

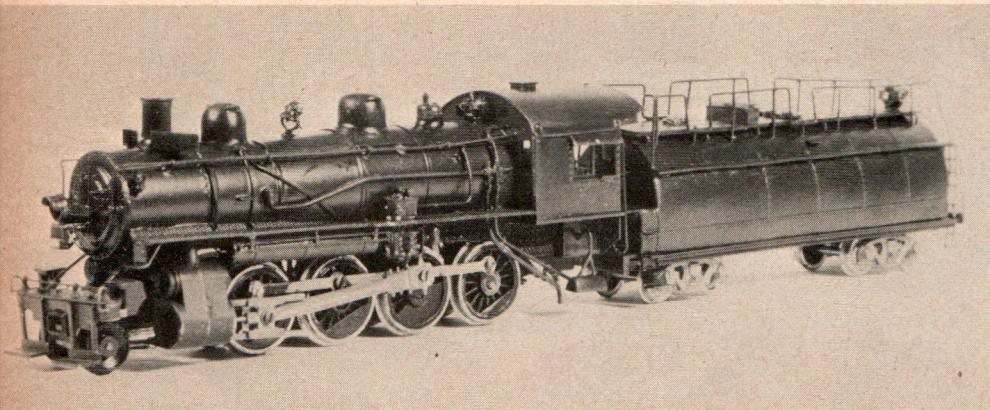
Photos by James E. Albanowski

Southern Railway Ms4 Mikado uses superstructure from United Ps4 on mechanism from United USRA Mikado, with tender from same. Wimble smoke duct was built up from photos on the prototype loco.



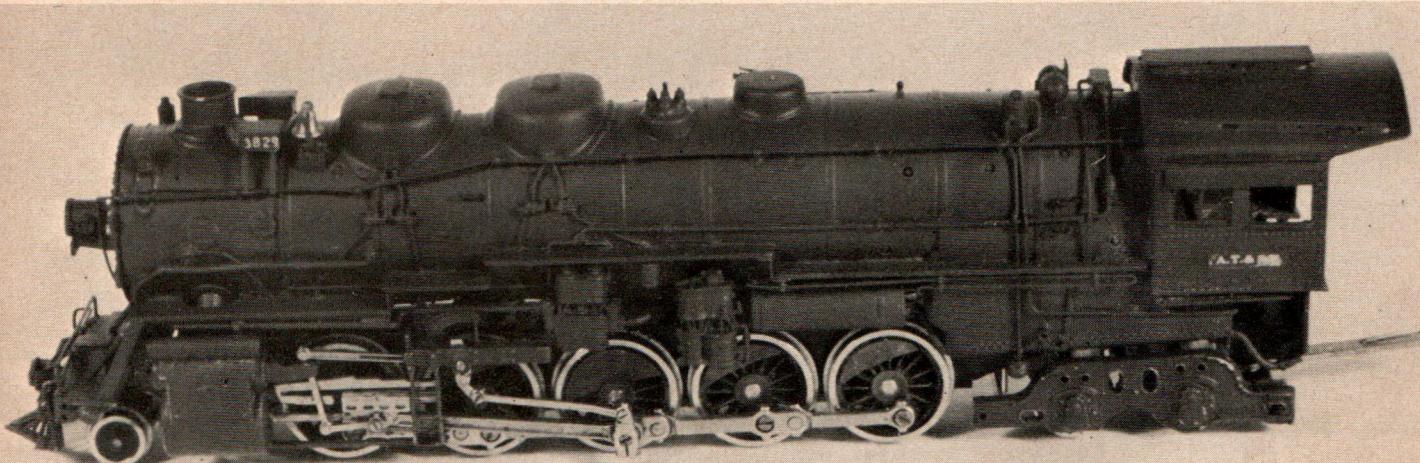


Chesapeake & Ohio 2-8-4 class K-4 is an easy conversion from a PFM Berkshire. Domes have to be unscrewed and positions interchanged. Cal-Scale air pump shield kit 2005 is mounted to pilot deck and headlight lowered, oval number plate attached, and rivets filed off cab to simulate welded unit. NKP tender can be retained but also useful is Gem rectangular 12 wheel C&O tender if available.



Southern Pacific C-9 2-8-0 utilizes superstructure from West Side SP T-31, mechanism from Varney Old Lady, pilot and motor from Paragon SP 0-6-0. Haystack tender was made by opening bottom seam of Gem SP A-5 Vanderbilt tender and inserting new ends.

Santa Fe No. 3829 2-10-4 in 1919 version has United's original sports model cab replaced with square cab from 2-8-0, 4-4-2, or 2-6-2. Trailing truck was replaced with ATSF Berkshire truck with the frame cut to clear. Drifting chambers were soldered to tops of cylinders. Cary FP-129 Elesco older style feedwater pump later replaced more modern version shown just ahead of the airpump.



sive since it requires the purchase of two locomotives. Left over will be a USRA Mikado superstructure and a mechanism from a Southern Pacific, which should fit together into a highly usable locomotive.

West Side's T-31 disappears when creating both a Great Northern 4-6-0 and a Southern Pacific C-9, but other component parts are needed to finish both jobs. And so it goes on other locos as well.

For the modeler, the hardest job is often the actual researching, to find the closest possible model to the engine you want for your pike, and then double checking the model to be sure it is as authentic as it should be, and then determining what work needs be done to make the model you want.

The greater the accuracy you will seek, the harder your job will be since the availability of suitable locos for conversion will drop. The skilled modeler will also soon learn in what areas he can fudge a bit, and, more important, those areas where he can't. A locomotive can be a foot too long or too short and few modelers will be the wiser (although a fussy builder will know his model is wrong and it will bug him continuously), but put on the wrong valve gear, or sand dome, or tender, and the entire effect can be ruined.

The job is also made easier by keeping in mind the different families of locomotives, which can be grouped several ways. One, by builder: Alco locos often have distinctive family characteristics, as do locos by Baldwin and other builders. Two, by design: USRA types were much alike from road to road even when from different builders, a fact which the model loco builders have capitalized on. Three, by railroad: Pennsy locos have many common features, as do New York Central hogs, "Harriman" locos, etc.



Dry Transfer Lettering

SOME modelers have never tried dry transfer lettering, perhaps thinking they are difficult to apply or present various problems in their application. This is not so. Once you get the knack of using them, they are not difficult.

There are some tricks to their proper use which must be learned if you want this new lettering medium to do the kind of job it is designed to do. Since dry letters are now being packed with certain kits, the techniques involved should be known to all modelers. For example, how would you like to take a mass produced box car and make it look like a scratch-built car turned out by a master modeler? Imagine the difference in a string of cars, first as they look fresh from the shops. And also as they look after they have had their freshness weathered away by industrial fumes, soot, rain, and snow. When weathered, they don't look like toys anymore, and you can get this realism so easily you won't believe it until you give it a try. I spent more than six months experimenting with all the dry transfer decals now on the market, and with various solvents and paints.

Application

Application of dry transfer lettering is best performed with a soft lead pencil, although some use a paper clip, a ball point pen, or other types of round applicators; try several ways to find the one that suits you best. To transfer dry lettering to a smooth surface, lay the strip of lettering you wish to transfer in correct location

and fasten to surface by making a single line of pressure completely across the strip, then finish by filling in over the complete area of type:

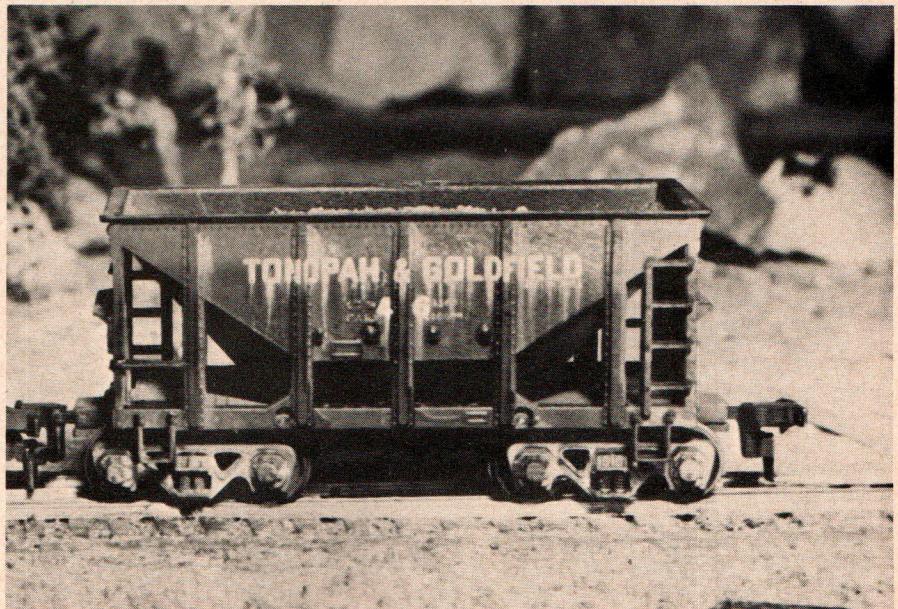
For a model that has outside bracing or cast detail, you must allow for the raised dimensions in order to have the lettering centered as it should be. First cut from sheet the section of lettering to be applied, leaving approximately $1/16"$ on all sides. Lay in position on model and start application of lettering at the CENTER of strip, working toward opposite ends. The lettering will adhere to the brac-

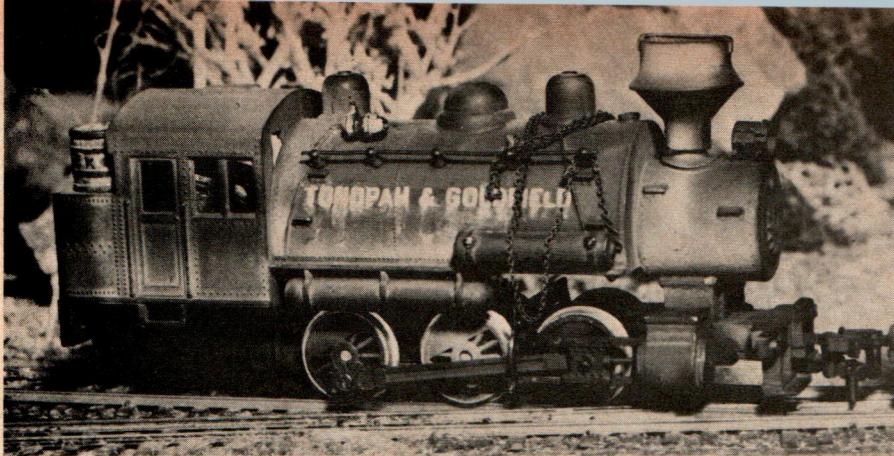
A combination of rub-on lettering and air-brushed grime combine to give this husky two-truck Shay that delapidated weathered look modelers like.

by Richard Appel

Dry rub-on lettering lends itself to special weathering jobs and recoloring but does require some care in applying.

Streaked lettering and paint give this ore car a heavily used and battered look, contrasting sharply with cars right out of the paint shop.





The lettering on this MDC Yardhog has been made to streak, as though exposed to excessive sun and rain. Airbrush did the rust work on boiler.

ing if you apply it there. If you do not, cut strip apart at each brace.

When all lettering has been rubbed from the backing paper to the model, gently lift backing off. Special problems may be encountered when using dry transfer lettering on wood. Test a sample first to determine if the backing paper will lift off without pulling the paint away from the wood.

If it pulls the paint away, you will need a releasing agent to separate the transfer sheet from the wood. I had best results with Carter's Rubber Cement Thinner (available at dime stores, stationers, etc.), flowing the solvent directly on the side of the model so that the fluid will pass between the paper sheet and the model. This will release the paper from the lettering and allow you to remove the backing paper without disturbing the paint. I tried it on several wood models with good results but I recommend that you try a sample first, as there are always exceptions to the rule.

Coloring

The white lettering of dry transfer decals can be colored after being applied to the model. I used the Tonopah & Goldfield dry transfer, an extra supplied in the Roundhouse Southern Pacific ore car kit, which has several roads and data in white lettering. I made a thin wash of Ulrich 410M Tuscan Red and Yellow styrene paint and thinner) and brushed it lightly over the lettering, giving it the final touch of authenticity. The paint dries immediately and weathers just as satisfactorily as the plain white lettering.

Weathering

Examination of the letters in dry transfer type decals shows that the ink is suspended in a film of wax. I assumed that the ink would run slightly if the wax could be dissolved or liquified, and that the lettering would then appear to have oxidized and become powdered, and to have run down the sides of the car as it does in the prototype that is exposed to the weather. I experimented with several makes of dry transfer letter-

ing and the various solvents, and found only one kind would dissolve without 'curdling' the ink—this is the type put out by Model Die Casting in several of their Roundhouse Special Car kits and the most all around satisfactory solvent was Ulrich 410M Styrene thinner. Before you try dissolving the lettering that may already be on your car, take a sample of the dry transfer and make sure that the solvent does not make the ink become 'curdled' as there is nothing you can do to fix it if it does this. I used an almost dry brush technique to apply the solvent, removing most of the solvent from my brush on a piece of Kleenex before applying to the lettering. Stroking lightly downward, the 'dry' brush gives a beautifully weathered appearance to the lettering, and will not mar the paint on the car when done with this amount of care. For different types of material—plastic, metal, wood, etc. see chart for particular problem that may be

The photos on these pages show some of the weathered effects obtainable using the dry transfers. The Tonopah & Goldfield 0-6-0 tank engine is a modified Roundhouse Yardhog. The light grayish areas are actually a reddish color. The effect was obtained by mixing a small amount of Ulrich freight car red into thinner and then airbrushing this wash over the areas where the rust effect was desired. A similar technique was performed on the Two-Truck Shay.

The ore car was an undecorated Roundhouse kit. The lettering for this car was part of the dry transfer lettering supplied with the kit. Other road names are also provided in the set. The weathered effect on the car lettering, and on the locomotives, was done by the method described in the test.

Table of Application

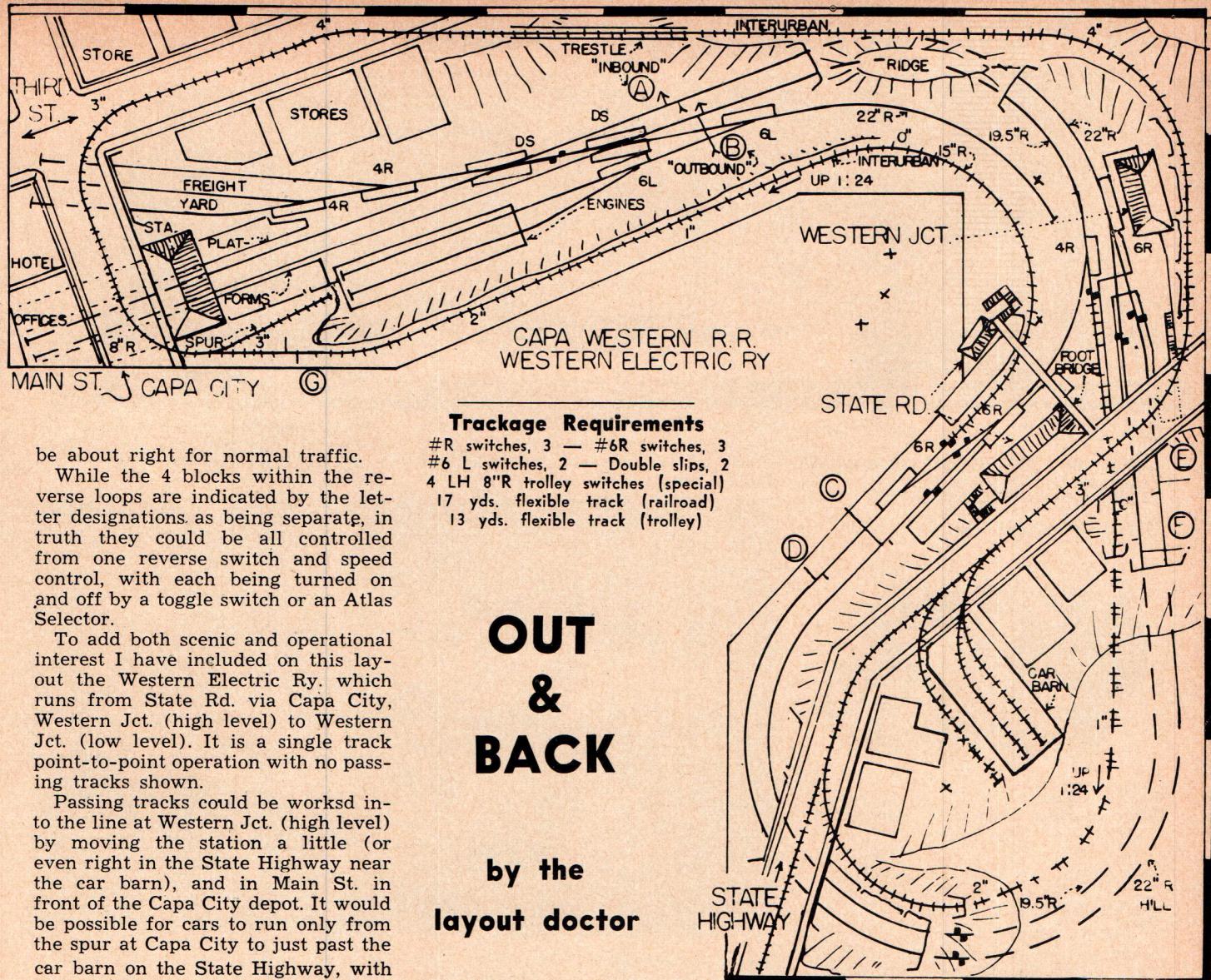
Plastic:	Prepainted. No problem.
Plastic:	Unpainted. No problem if using styrene or acrylic paint.
Metal:	Painted, with primer coat. No problem if lettering is applied at room temperature.
Metal:	Painted, without primer coat. Problem, test sample first as paint may pull off.
Wood:	Prepainted, PROBLEM! Test sample first. Further info. under application.

Out & back operation provides limited mainline running, permitting the operator to concentrate on the making and breaking of trains, and other switching moves in limited space.

THE operation for a small terminal for passenger and freight trains is of interest to many model railroaders who have no great desire for a long, long trail of trackage a-winding for prolonged running. Here is one version of the out-and-back layout theme worked into a pike which, in HO, is eight by ten feet, L-shaped. (For O scale, multiply by 1 1/2; for TT, take 3/4; and for N gauge, take 1/2). It provides both railroad and interurban running, and my suggestion is that the railroad be operated with diesel hood units.

The Capa City terminal has only 2 platform tracks, one primarily for inbound trains, one for outbound trains. The inbound platform track will also serve as arrival and make-up track for the short freights that will run, while either track will have to double as yard switching lead. The outbound platform track, will serve, in part, as storage track for coaches that are not in use. I forewent the luxury (and extra complications) of a right-hand escape cross-over between the 2 terminal tracks (between the parts of the word "plat-" and "forms") in order to get longer useful terminal tracks. Now, an inbound train pulls into the terminal, and its engine uncoupled to pull ahead under the office building. A switcher then comes from the yard, takes the cars through the two double switches (acting as a RH crossover), and pushes them either into the yard or into the outbound track. The road engine can then escape to the engine terminal for servicing or go to the front of the outbound train. This can be done with minor variations for either freight or passenger trains.

An outbound train at State Rd. station has the choice of two tracks, each of which is part of a reverse loop which ends around at Western Jct. station. The double tracks of the reverse loop are meant to act as holding tracks, layover tracks, or whatever you want to call them. Note that each track is divided into two control sections, giving you C, D, E, and F blocks. Those should store 4 trains, right? Really most of the time you'll doubtless store only 2 or 3 trains, with one moving out "inbound" shortly after a new one arrives, and all moving up one block if there is space. These blocks are short, thus limiting length of trains to an even greater extent than the length of the terminal tracks—2 or 3 passenger cars, 4 or 5 freight cars, plus loco (and caboose) would



be about right for normal traffic.

While the 4 blocks within the reverse loops are indicated by the letter designations as being separate, in truth they could be all controlled from one reverse switch and speed control, with each being turned on and off by a toggle switch or an Atlas Selector.

To add both scenic and operational interest I have included on this layout the Western Electric Ry. which runs from State Rd. via Capa City, Western Jct. (high level) to Western Jct. (low level). It is a single track point-to-point operation with no passing tracks shown.

Passing tracks could be worksd in to the line at Western Jct. (high level) by moving the station a little (or even right in the State Highway near the car barn), and in Main St. in front of the Capa City depot. It would be possible for cars to run only from the spur at Capa City to just past the car barn on the State Highway, with the extensions to State Rd. and Western Jct. (low level) stations being thought of as freight interchange tracks. I show no freight sidings on the interurban, so that package freight should be carried by box motor. A siding or two added would require pulling standard railroad freight cars along the interurban with either the box motor or a steeple cab.

Another type of operation that has occurred to me since finishing the drawing would be all-interurban. It could be all overhead wiring, but it might prove more interesting if the part shown interurban was run by overhead wire, as originally intended, but what is now the main-line railroad to be operated by outside third-rail. Then a car or short train of interurbans could leave Capa City (low level) on third rail and change to overhead trolley at Western Jct.

K. W. Jay, 5 Golfwood Hgts., Weston, Ontario, built this unusual Anglican Church from balsa covered with pebbles from a Lake Ontario beach. Stained glass windows are transparencies of actual church windows. Pike follows CPR, TH&B.

Trackage Requirements

#R switches, 3 — #6R switches, 3
#6 L switches, 2 — Double slips, 2
4 LH 8"R trolley switches (special)
17 yds. flexible track (railroad)
13 yds. flexible track (trolley)

OUT & BACK

by the
layout doctor

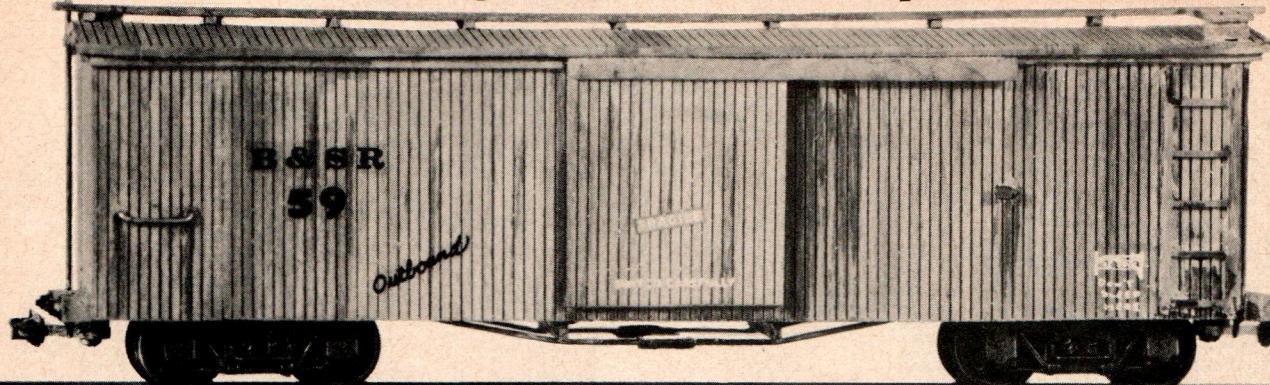
(low level). Then it would climb the hill, run along State Highway past the car barn, past Western Jct. (high level), left along the top wall, and through Third and Main Sts. Still on overhead trolley, the car would proceed downhill to State Rd. where a change to third rail would be made

before proceeding around the reverse loop, past Western Jct. (low level) to enter Capa City terminal (low level),

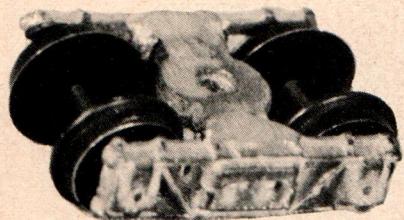
The changeover from third-rail to trolley running could be done manually, but I know from experience that it also can be done by remote control.



HOn2 Rolling Stock Is Easy by Bruce C. Bowden



Enough component parts are available to make operating HOn2 layouts a relatively easy thing to scratchbuild.



Bowden's HOn2 trucks built up from Gandy Dancer components, with 22" diameter wheels, 4" centers.

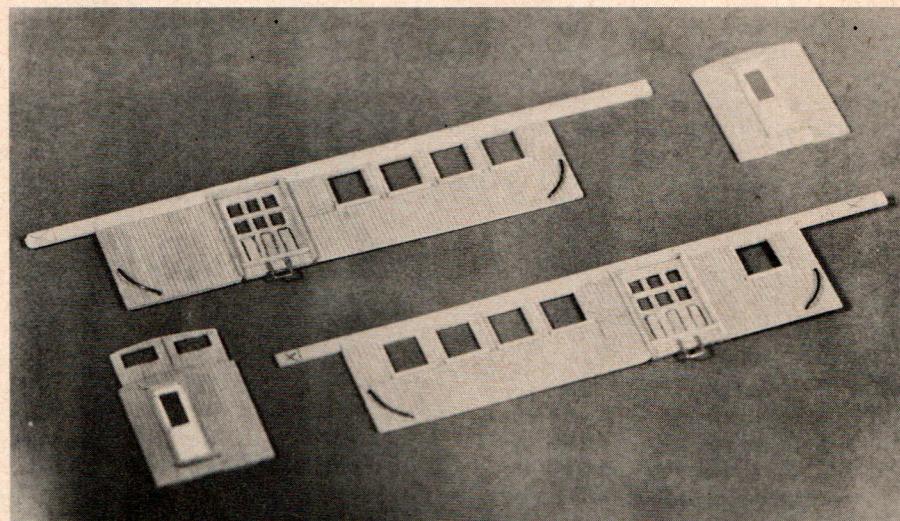
SOME YEARS ago when I first became interested in HOn2, the greatest deterrent was the lack of scale parts. I had built up several cars in the late forties using cardboard and cut down HO trucks, but these were grossly over proportioned. A few years ago when the bug caught up with me again I decided to build up and stockpile some trucks as a first course of action.

I experimented with various Kemtron HOn3 wheelsets and several varieties of TT gauge trucks. The Kemtron wheels were too wide, and all the sideframes (even though I could obtain the correct four foot centers) were massive. As a compromise I settled on some TT gauge track components which I purchased in bulk from Gandy Dancer. In getting oxidized brass wheels I avoided the painting problem and having non-shouldered axles the wheelsets were easily regauged. The sideframes (arch bar) and bolsters were soft metal. The latter were cut down to proper width and the whole truck assembly was then set up in a homemade jig for soldering.

Plans and photographs for HOn2 equipment are not as scarce as you might think. Two excellent sources are. Linwood Moody's "The Maine Two Footers," and Crittenden's "The

Bridgton & Saco River HOn2 boxcar was assembled in an easy evening's time, using scribed sheathing, stripwood, and the author's modified trucks.

Caboose sides, below, were built up from Northeastern basswood using plans in RMC Rolling Stock Manual*. Car is an Edaville (SR&RL, hack).



Maine Scenic Route." John Derr also offers a fine selection of plans. A few plans appear in RMC's "Rolling Stock Manual," (Blue Cover Edition*) and many have been printed in these pages over the years. As far as the Maine roads are concerned, most of the box cars were 26' to 28' in length and a few were 30'. There were flats and gons, and even a few tank cars. These were plain old tanks mounted on flats. Passenger cars were generally about 43' long. The cars were 6' to 6 1/2' wide with the passengers running about 7'. Freight cars averaged about 9' high and the passengers were a foot higher. Coupler centers were 15" above the rails. Many types of equipment are still rolling in South Carver, Mass., on the Edaville RR.

For box cars I prefer to make them up from scratch, although TT gauge 40' box cars are just about the same size, but about a foot too wide. I use 1/8" flat stock for the floors, and 1/32" scribed sheathing for the sides, ends, roof and doors, to make my own. TT gauge roofwalk material and brakewheels are just the right size. Some flat brass ladder stock, a few grabirons, and some wire for the truss rods finish up the trim details. For couplers I use a dummy knuckle by

Kemtron: X-329. This is the closest to scale I have found. The cars are very light and the weight is where you want it—in the trucks. The main reason for the light weight has to do with the motive power. The design of the prototype engines (Forney's were the most popular) does not permit concentrating much weight over the drivers.

You'll find you can crank these little cars out by the proverbial car load once you get into it. Materials go a long way and for the most part I use scrap left over from full size cars. Passenger cars and the caboose pictured here under construction are another story. Because of the roof detail, windows, and end platforms, they are infinitely more time consuming. Now and then every modeler needs a good challenge. The caboose has full interior detail and is lettered for the Edaville. I have a particular fondness for this little cab having ridden many miles around the Edaville in it.

The AHM HOn2 1/2 cars can be modified easily for the two foot gauge although their usage on a pike would be limited to industrial purposes. Not out of place would be a string of tilt hoppers brought up behind the track repair crews.

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HAVE: Testrite enlarger, other darkroom equip., pass. timetables. **WANT:** ATSF, SP, Brass eng. HO. Also MDC 0-6-0 kit. SAE appreciated. John Hodson, Britt, Iowa 50423

WANT: PFM 2-6-2 Prairie King, 4-6-0 V&T and Rivarossi "Hiawatha" contest. J. G. Peine, 2927 Jefferson Ave., Davenport, Iowa 52803

HAVE: Tenshodo U.P. 4-6-6-4; Austin U.P. early 4-6-6-4; Tenshodo USTA 0-8-0. **WANT:** Tenshodo ATSF 2-10-4; United ATSF 2-8-4; United ATSF 2-8-0. LeRoy Berglund, 403 E. 13th, Larned, Kansas 67550

WANT: RMC, first issue thru 1945, Flying Revue Internat. All before 66. Most RR Mags. Sperry Rail Car Sides O ga. E. E. Almond, 624 Nelson Pl. Newport, Ky.

HAVE: Tenshodo S.F. FT pass. SD9 PRR & S.P., GP7, NYC, ATSF, unpntd. FT & GP7; Blue Line & Amer. Beauty 85'. I.C. & S.P. **WANT:** GN Good brass steam. Your list for mine. D. R. Berry, 3223 Roman St. Metairie, La. 70001

WANT: Lionel 752 loco for City of Portland any cond.; HO Rivarossi Hiawatha and PSM HO FM Rd. switcher w/wo pwr. trucks. T. Speidel, 5 MacIntosh Rd., Bedford, Mass. 01730.

HAVE: HO equip. or cash. **WANT:** HO Marklin &/or TT Rokal items. My list for yours. P. J. Sabby, 29 Highland Ave., Cambridge, Mass. 02139

HAVE: Lionel std. ga. eng. #10 cars #332-2, 339-2, #341-1; track, sws. Also 250W ZW Trainmaster. **WANT:** Lionel O ga. eng. #773, not the new one, or Rio Grande. C. S. Weiler, 88 Parkview Ave., Stoughton, Mass. 02072

HAVE: 2 Cross-kit 4-6-2's & Cross-kit 2-6-2. **WANT:** Varney Heavy 2-8-0 w/tender. Kit or blt. up. N. F. Schaberg, 15720 Minock, Detroit, Mich. 48223.

WANT: Historical RR Memorabilia. State your wants. Alden Miller, 3212 34th Ave., So., Minneapolis, Minn. 55406

WANT: Tenshodo GP or SD units. State price & cond. All letters ans. Ronald Exch, 461 Goodhue St., St. Paul, Minn. 55102

WANT: Modelmaster HO trackspikes, Hobbytown multidrive & mechanisms. All letters ans. Richard Provance, 7220 Gen. Sherman Lane, Affton, Mo. 63123

HAVE: Aristo 2-8-2, Ambroid Poultry Car kit. **WANT:** Diesels or pass. equip. Rev. Walter Smith, Box 224, Hillsboro, N.H. 03244

HAVE: AF "S" ga. steam eng. **WANT:** P.L. T-1, 1-1, H9, L-1 or brass Camelbacks, AHM std. pass. cars. Joe Burkel, 133 Lehigh Ave., Blackwood, N.J. 08012

HAVE: Max Gray ATSF 4-6-2, Takara/Gem SP Mogul, Brass C&NW 4-4-2, Penn Line 4-4-2 & 2-8-0, frt. cars & kits. **WANT:** Other frt. & pass. car kits, ATSF Mike, UP 2-8-0. SAE. R. J. Flanigan, 417 Fifth Ave., Belmar, N.J. 07719

WANT: Used Lionel 0-4-0, Lionel or Marx 2-4-2's, any cond.; reversing unit, any type, good cond. John Benyo, 25 Schley St., Garfield, N.J. 07026

HAVE: Left, right, Wye turnouts; 18" snap-track, 22" also; Atlas turntable w/motor. **WANT:** #6 sws., left wo/motors. Kevin Brady, 16 Blue Ridge Ave., Green Brook, N.J. 08813

HAVE: HO. **WANT:** Athearn SD-45, Demonstrator, Blue/White, exc. cond. Advise your needs. Stan Borkowski, 198 Dutch Neck Rd., Hightstown, N.J.

WANT: Lionel cat. 1920 to 1939. Frank Sobolewski, 322 S. Allen St., Albany, N.Y. 12208

HAVE: Kodak Verifax copy machine w/supplies. **WANT:** Lionel Hudson #700E. K. Voss 122 Wentworth Ave., Alberton, L.I., N.Y.

WANT: Mantua locos, or parts, Belle, Mogul, Bee, Goat, w or wo/motors. Also parts to brass caboose 4 & 8 wh. Back issues of H.O.M. Fred Bachand, RD 2, Johnsonville, N.Y. 12094

WANT: Alex. O ga. Budd alum. body extrusions; body & truck castings for same. Robert Wagner, 333 E. 34th St., New York, N.Y. 10016

HAVE: Varney 2-8-4 kit, MDC 4-4-2, Bowser Mtn. Brass Boiler & S/B front. **WANT:** MDC 2-6-2, Bowser 4-6-2, Vanderbilt coal tender or . . . D. Ingberman, 326 Chesterton Ave., Staten Island, N.Y. 10306

WANT: Penn. Scale Models Fairbanks-Morse Baby Trainmaster HO scale. Advise price & cond. Henry Statowski, 333 Calhoun Ave., Throg's Neck, N.Y. 10465

HAVE: Lionel 027 steam frt. train set, track, sws., acc. **WANT:** HO rolling stock kits, structure kits, lineside scenery items, motor vehicles. Russ Christensen, 76 Yarmouth Rd., Rochester, N.Y. 14610

WANT: 8 lb. & 12 lb. used park size RR rails, any quantity. Also pix of park size trains. Varney Streamline 4-6-4. Leslie Tuttle, Box 191, Rural Hall, N.C.

HAVE: Lionel O ga. #2020 Pennsy 6-8-6 steam turbine wo/tender. **WANT:** HO dbl. truck trolley or interurban car. R. Leitch, 18707 Ferncliffe Ave., Cleveland, Ohio 44135

HAVE: Lionel repair parts, frt. cars, acc. (period 1946-1956). **WANT:** Used Lionel pass. cars, diesel locos & magnetraction steam locos only. John Bayne, 4 Iona Ave., Narberth, Pa.

HAVE: Amer. Flyer 4-4-2 loco w/tender, 4 cars, exc. cond. **WANT:** Athearn 4-6-2 loco & tender kit. Thomas Barger, 8715 Patton Rd., Philadelphia, Pa. 19118

WANT: Varney Casey Jones loco, plus others. **HAVE:** Old Lady, Varney kit. M. R. Seidel, 519 N. 8th St., Reading, Pa.

HAVE: United USRA 2-8-2, Bowser 4-6-2, 4-6-6-4, Penn Line-Cary 2-8-2, AHM cab-fwd. 0-8-0, Krauss-Maffei & 2-8-4, many others. **WANT:** Hobbytown GP-30 chassis. Harlan Lane, Rte. 2, Gravely Rd., Kingsport, Tenn. 37660

HAVE: 2 Ives 6 1/2" frt. cars, S & O stuff. **WANT:** #11 Ives tender, Lionel 626, 627, 628, 629 G. E. eng. or trains. John Graef, 7304 Turtle Creek, Dallas, Texas 75225

HAVE: Trains Mag. 1950-65, RR books, misc. prewar Lionel, HO ga. Marklin. **WANT:** Lionel std. ga. 385E loco or parts, info. Egger-Bahn or ATSF HO. G. C. Bassett, 3204 Tyrone Rd., El Paso, Texas 79925

WANT: O ga. M. G. cab-fwd. S. P. AC-4 or later. Swap any items on my list plus cash, or other M.G., Lobaugh locos or cars. D. S. Jenkins, Rte. 1, Box 155, Kerrville, Texas 78028

HAVE: OO Scalecraft Diner Kit, Strombecker box car kits, Old Varney kit. **WANT:** HO. SAE. Robert Harmen, CMR #8 Box 369427 Lackland AFB, Texas 78236

WANT: RMC—Mar., Apr., Sept. 1954, July, Aug., Sept. 1957, Mar., May 1963; MR—May 1954, June 1957, Mar., May 1962. Will pay 50c for exc. cond. Richard MacNary, 621 W. Cook Rd., Mansfield, Ohio.

WANT: Tenshodo F-7 or SD-9. **HAVE:** Tenshodo F-9, H. Maywald, P.O. Box 272, Bellmore, N.Y. 11710

HAVE: Model Tramways System cars LVT 900s & 410s. Suydam BA&P, Baker Power Trucks, Penn Line Decapod & GG1, Akane B&O EM-1, many others. **WANT:** Traction equip. Peter Oppman, 106 Bronxville Rd., Bronxville, N.Y. 10708

HAVE: MR, RMC, MT, Cat., Annuals, etc. 1942-present. **WANT:** HO. Stamp for list. Fred Gersh, 202 S. 2nd St., Brooklyn 11, N.Y.

HAVE: Athearn Hustler, exc. cond. **WANT:** AHM #6452 N.Y.C. Rwy. P. O. car. Vincent Reiner, 132-35 Sanford Ave., Flushing, N.Y. 11355

HAVE: Tyco 189 10-wheeler, lighted. **WANT:** 0-6-0 switcher w/ slope back tender, or other HO eng. R. M. Downs, 172 N. Broad St., Johnson City, N.Y. 13790

HAVE: Pay top dollar for Max Gray wrecking crane O ga. Describe & state price. Harold Titus, 625 Miami St., Marion Ohio 43302

WANT: to buy refinished & reblt. loco & tender #400, 392, 390, 384. Robert Nyerges, 20800 Lake Rd., Rocky River, Ohio 44116

HAVE: PFM CP 2-8-0 unpntd., exc. cond. **WANT:** Walthers PP, PPK, P-38 or what have you? W. J. Crosby, 1936 Fernwood, Toledo, Ohio.

WANT: Pre-war Lionel U.P. Streamliner. Also post-war Lionel service tool ST-311 wheel puller. State price & cond. Milton Silver, 2231 N.W. 43rd, Oklahoma City, Okla.

HAVE: SP AC9 (Akane—not Summer Special). **WANT:** United K28 & Balboa K36 or other D&RGW HOn3 Mikes or Consol. William Dippert, 2433 S.E. Grant St., Portland, Ore. 97214

HAVE: Tyco HO Pennsy switcher 0-4-0 & 3 cars plus Pennsy caboose. **WANT:** Lionel #164 log loader or Lionel Steam Loco w/whistle tender. Lindy Staller, 920-9th Ave., Brackenridge, Pa. 15014

HAVE: Common std. ga. cars 100 & 500 ser. frt., 332 ser. pass. cars. Also #10 eng. **WANT:** 516 hopper. SAE for list. R. C. Wunderlich, 1305 Woodbine Ave., Bristol, Pa. 19007

HAVE: Model airplanes, wood kits & ready-to-fly, motors, acc. etc. **WANT:** Std. O. 027, HO trains, any cond. Harry Henning, Jr., P.O. Box 13, Kulpsville, Pa. 19443

HAVE: Model Builder, HO Monthly & MT. **WANT:** PFM geared locos, Athearn 4-6-2 & AHM BL-2. State cond. Major Bruce Bowden, 307 Mitchell Blvd., Lubbock, Texas 79415

HAVE: Lionel Pennsy Gond. #2462 Shoe uncplrs. **WANT:** A. F. #24222 covered hopper & any Junkers for parts. Ken Secret, Rte. 1, Box 1230, Issaquah, Wash. 98027

WANT: A. F. S ga. locos, #353 Circus, #342DC, #285, exc. cond. #354, 356 Silver Bullet, mint cond. A. F. cat., adv., signs, serv. man, Robert Estes, 17210-34th Ave. So., Seattle, Wash. 98188

HAVE: Locos, cars, parts. Your list for mine. **WANT:** A. F. S Ga. 320; 324 AC, 353 Circus, 313, 21145, locos, any diesels. Dan Olson 16150-41st Ave., N.E., Seattle, Wash.

WANT: Complete set superstructure & end casting for HO GE U25B (RMC 11/62). State price & cond. Morton Munson, 627 Grant, Shelton, Wash. 68584

HAVE: Aristo Craft 4-8-2, 2-8-2, 4-4-2, 4-6-0, 4-6-2 Camelback, Old Lady, Athearn diesels, pass. & frt. cars. **WANT:** United V&T 4-6-0, Varney Big Consol. Mario James, 3545-21st Ave., Kenosha, Wis. 53140

WANTS: to buy L & RHS Bulletin #83, CN Number Plate, HO Ga. Grant pass. cars in old CNR colors. Robert Baker, 20 Melfa Ave. CFB Petawawa, Ont., Can.

HAVE: RMC 1951-1965; MEW 44 ton Switcher. **WANT:** On3 & 1943 Trains Jan.-Oct. SAE for list. Harold Midwood, 30 Sharpe St., Scarborough, Ont., Can.

WANT: Tenshodo CN pass. cars Canadian Nat., green & black, streamlined, any type except Obs., kit form or r-t-r. David Gartdave 301 Lytton Blvd., Toronto 12, Can.

WANT: Revell 1961 HO Chrysler Corp. autos, Mercury (US) Chevrolet '64 metal pick-up truck. State price & cond. Jen-Jorgen Juul Pedersen, 2 Egemosen, Skodsborg Denmark.

WANT: Old toy trains, trolleys, train cat. Frame for 349E or 249. Also HO eng., pass. cars; LaBelle or Binkley old time pass. cars & eng. Colonel Carter, Rt. 5, Box 2, Mobile, Ala.

HAVE: TenShodo GN 4-8-4, 2-8-2; TenShodo GN caboose; LMB T&P 2-10-4. WANT: AHM ATSF 2-8-8-2, std. pass. cars; Balboa ATSF 4-8-2, 2-6-2, etc. Conrad Pickren, 304 W. Coosa St., Sylacauga, Ala. 35150.

HAVE: Athearn SDP-40 (SF), F-7A Hi-F (SF); Revell F-7 gear drive chassis. WANT: MDC 0-6-0; Hobbytown Alco rd. switcher; Kadee &/or MEW log cars. Jerry McCrory, P. O. Box 335, Hot Springs, Ark. 71901.

WANT: Lionel 6464 box cars, espec. WP-1 Red letters, Black letters; MStL-50 Green; WP-100 Orange w/White Feather; DRG-650 Yellow Roof; 203 switcher, others. Richard Meerly, Box 638, Bijou, Calif. 95705.

HAVE: Marx 3-rail O ga. 2-4-2 w/SP tender & pwrrk, rolling stock. WANT: Tyco GP 20 AT&SF. Richard Gunter, Jr., 8961 Plaza Park Dr., Elk Grove, Calif. 95624.

HAVE: 1947 Brass Varney 10-whrl. O ga. KD2 motor. Very good. WANT: HO Western Brass. H. Conklin, 2018 N. Highland Ave. Apt. 10, Hollywood, Calif. 90028.

HAVE: TT Flex Track—159' Wrenn, Gem, Wrenn sws., wood rdbd., etc. WANT: HO N3 locos, HO LaBelle or Ambroid. Also have Pre-war Mantua metal pass. bodies. Herb Smith, 1116 Walnut, Inglewood, Calif. 90301.

HAVE: Marnold R-50 Rheostats, TenShodo DPDT sws., Hobbyline Plastic Berkshire kits, exc. cond. WANT: PFM United HO N3 D&RGW Brass Coach, Caboose, or other HO N3. Gary Wilson, 1800 Wilma Pl., Long Beach, Calif. 90810.

WANT: Colored pix, slides, drawings, info. to help determine exact shades of blue AT&SF 3460 was pntd. Robert Semichy, 246 Garden Hill Dr., Los Gatos, Calif. 95030.

WANT: Lionel 0-6-0 switchers—6557 caboose—0-72 track 2426 w/tenders. 2530 ser. pass. cars. 2354 NYC diesels A&B units. George Copeland, 821 N. Grove, Ontario, Calif.

HAVE: Surplus to swap. WANT: Any Marklin frt. & pass. cars & locos 3031, TT800, 3051, 3038, 3066, 3067; HAG AC locos & railcars; catenary; British HO-00, etc. Victor West, 3256 Amhurst Dr., Riverside, Calif. 92505.

WANT: On3 eng., equip.; 0 ga. eng., equip. Gordon Calahan, 5370 E. Asbury Ave., Denver, Colo. 80222.

HAVE: Official Guides, frt. equip. reg. '61-'66; New Haven, Central Vt., Boston & Maine Employee TTs, 50's, 60's HO kits. WANT: steam locos, blt. up in HO, RR Tourist Guides. Allen Sharp, 100 Shennecossett Pkwy., Groton, Conn. 06340.

HAVE: United Pennsy 2-8-2, unptd.; Santa Fe 2-8-0; TenShodo USRA 0-8-0; Balboa SP 2-8-2 unptd. WANT: United Pennsy 4-6-2; NYC Niagara 4-8-4; Gem L&N 2-8-4 Berk., etc. Charles Burgmuler, 122 S. Shelley Dr., Clayton, Del. 19703.

HAVE: Atlas Brass Rail, Flex & Snap Track, Turnouts, Cork rdbd., Tru-Scale N. S. Wye. WANT: Back copies RMC, MR, Trains, HO N3 or what have you? Charlie Weaver, RD #1 Box #30 Magnolia, Del. 19962.

WANT: Main frame for Rivarossi, S.P. 4-4-2. 2 frames for Hobbyline F-M diesel switcher. Walter Spence, 27 S.W. 4th Ave., Hallandale, Fla. 33009.

WANT: "Century of Southern Pacific Steam Locomotives" by Guy Dunscomb. Top dollar for A-1 copy. William Kuechler, 6100 103rd St., Lot 103, Jacksonville, Fla. 32210.

HAVE: List of O & std. ga. for SAE. WANT: Lionel 8976, 763E Gray, 250E & cars, 792 793, 794, 256, 4, 156, 156X, 2624, 715, 753, 783, trolleys, cat. Tom Johnson, 815 E. Olive St., Arlington Heights Ill. 60004.

WANT: Lionel 700 Hudson. HAVE: Special model Aero eng. 1" bore & 1" stroke, w/magneto, throttle, spark advance, tappets, etc. C. Kowal, 6615 S. Bell Ave., Chicago, Ill. 60636.

HAVE: MTS Electroliner, Athearn RDC plastic motors, RDC trailers, Walthers Pug cars, Atlas brass snap-track. WANT: Ken Kidder 57' HO Rapid Transit cars. Joseph Reuter, 1819 N. Mason Ave., Chicago, Ill. 60639.

WANT: Lionel & A. F. std. ga. trains & cast iron toys. Hamilton Stern 221 N. LaSalle St., Chicago, Ill. 60601.

HAVE: Akane USRA 2-6-6-2 unptd. Also HO N3 trucks for United 2 truck Shay. WANT: United Shay or Climax CM 2-8-0, 4-6-0; or 0-6-0 by MEW West Side Heisler. Bill Martinsen, 1407 Carroll Ave., Ames, Iowa 50010.

HAVE: Extensive old Lionel O or 027 equip. All kinds. WANT: Scale locos, diesels (not Lionel) for 3 rail op. AC-DC motors. SAE or my list for yours. J. J. Jecmenek, 158-15 Ave. SW, Cedar Rapids, Iowa 52404.

HAVE: English 4-6-2, running cond. Also RR calendars. WANT: Any ATSF or C & S. Brass locos. Any cond., all parts must be there. Some junkers acceptable. All letters ans. John Hodson, Britt, Iowa 50423.

HAVE: Back issues MR, Model Trains. WANT: Good clean unused #70 Brass rail. Avery Norlin, McCracken Kansas 67556.

HAVE: PFM UP 2-8-0; RI 0-8-0; Sierra; Brass Bowser M-1; Baldwin 1000hp; Alco 1600 A&B, others. WANT: Gem H-10; PFM SW-7; brass frt. cars. Lyman Ackerman, 7012 Ithaca, Metairie, La. 70003.

HAVE: HO sets, also Lionel equip., acc., etc. WANT: Lionel locos, cars or what have you. List for stamp. W. G. Freeberger, 1208 Dulaney Valley Rd., Baltimore, Md. 21204.

HAVE: 3464-159000 Box, 6462 black, 638-2361 Van Camp Box. WANT: 6352, refrigerator car. Bill Lucas, 11512 Deborah Dr., Potomac, Md. 20854.

HAVE: Builder's plate from Washington, D.C. streetcar, PCC type. WANT: Any steam or traction builder's plate of equal value. John Hilton, 4010 Highview Dr., Silver Spring, Md. 20906.

WANT: A. F. HO New Haven type pass. cars. Will pay cash or swap from my list. Brian Cudahy, 38 Webster Dr., Holliston, Mass. 01746.

HAVE: Aurora roadrace equip. Car, pwrrk., straight & curve track, HO. Fair cond. WANT: Any HO RR equip. Trade lists: David Albro, 33 Redford Dr., Northampton, Mass. 01060.

WANT: HO John English Baldwin diesel switcher. State price & cond. first letter. Will buy. Don De Forge, 86 Walnut St., Quincy, Mass. 02171.

HAVE: Lionel O ga. items, SAE. WANT: 6400, 2500 and AMT cars suitable for painting. Also #58, 59; #752 Coach; Gargraves sws. Peter Baird, 221 Wilson Ave., Wollaston, Mass. 02170.

HAVE: TenShodo GP-20 S.P., exc. cond. WANT: TenShodo GP-9 or GP-7. State cond. first letter. Send for list of other HO items. Erwin Hughes, 63 Indian Hill Rd., Worcester, Mass. 01606.

HAVE: HO diesels, GP 20, GP 30, F 7. WANT: HO Intercars or City cars. Your list for mine. A. H. Lieder, 1206 Hawthorn Rd., Grosse Pointe, Mich. 48236.

HAVE: AHM Genoa, exc. cond. Walthers Gas Elect. kit, pwrrd., misc. cars. All HO. WANT: Small SP HO locos, HO N3 rolling stock & trackage. SAE. H. Phillips, 20643 Maple Lane, Grosse Pointe, Mich. 48236.

HAVE: Locos, PFM, Balboa, Gem, Max Gray, LMB, other items. WANT: O scale Max Gray U.P. 4-8-4, #246 Reefer, #401, 402 Gondas, #911 caboose, Athearn metal kits, SAE. John Addis, 1573 Pruitt Dr., Highland, Mich. 48031.

HAVE: O ga. Trolley layout, benchwork, track overhead. WANT: Backyard 12" to 18" RR rolling stock & equip. Hal Nyberg, 2807 Brookside Blvd., Jackson, Mich. 49203.

HAVE: Pre-1930 O ga. A.F. Ives Locos: A.F. Ives, Bing Cars. WANT: Marx "Wm. Crooks" train; A.F. "Oriental Ltd." Train. W. F. Becker, #715, 469 Ada St., St. Paul, Minn. 55107.

HAVE: Akane B&O 4-6-2 P-7 Pacific. WANT: Tyco RTR 2-6-2 Prairie and Alco 430 diesel in G.B.&W. Rd. name only. Donald Rice, 227 E. 10th St., Winona, Minn. 55987.

WANT: A. F. S ga. GP-7, GP-9 or SD-9, any rd. name, w or w/o motor, any cond. Junkers welcome, also pen pals interested in RRs. Info. & lit. about CB&Q RR, Randy Johnson, 705 Madison St., Canton, Mo. 63435.

WANT: Virginia & Truckee pix of eng., etc. Will buy or trade. Mike Student, 1798 Hillboro, Reno, Nev. 89502.

HAVE: Marx O ga. Hudson streamline pass.; 4-whl. loco, tender, frt. cars; track, man. sws., acc. AF S ga cars, track acc. WANT: S ga. scale items. SAE for list. Eugene Fletcher, 45 Riverside Ave., Hudson, N. H. 03051.

WANT: PFM Crown N.P. 2-8-8-4, unptd., mint cond. Arnold Cole, c/o F.A.A. Northeastern Blvd. & Harris Rd., Nashua, N. H. 03060.

HAVE: HO Brass locos & kits. WANT: O scale locos & kits of equal value. Albert Koehler, 146 Hickson Dr., New Providence, N. J.

HAVE: Max Gray Water Column, Sanding Tower, Scale O ga. cars, Nickel-Silver sws. WANT: Lionel std. ga. eng. #9E. W. Grimm, 204 Gregory Ave., West Orange, N. J.

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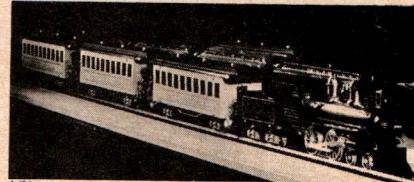
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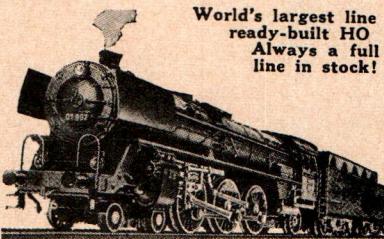
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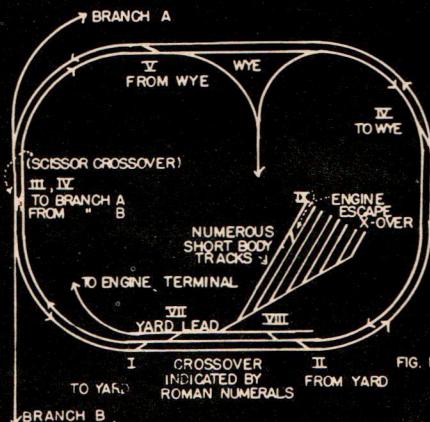
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NO SCALE
TOO MANY CROSSOVERS

TRUE ENOUGH that model railroading is fun, they said. Another not so happy phrase goes something like this: "Model railroading is 35% inspiration, 10% exhilaration, and 55% perspiration." For, while model railroading is fun, it becomes something less than fun if maintenance is continually deferred.

In past issues I've covered some of the various problems which do arise: locomotive jam-ups, short circuits, open circuits, etc. I haven't done this to emphasize the negative; rather I want the beginner to become aware of problems which do occur and should be remedied at the earliest possible time, even systematically. The old timers know about these problems and have learned from experience how to keep troubles to a minimum.

The old line O-gauger is perhaps best off from the maintenance angle. He might pull a few draw bars on a heavy train, but he'll have a minimum of trouble with dirty rail, out of gauge track, or derailing. Cars and locos are usually heavy enough to cut through the grease and grime that can coat railroad track. O gauge track laid with .172 rail and four spikes per tie will generally stay put for years and years without any maintenance.

HOers and other small gaugers aren't quite that lucky although the manufacturers have improved their products tremendously over the past twenty years, so that many problems are minimized.

The model railroader can also help himself by avoiding certain pitfalls which can cause grief later. We've seen too many model pikes bogged down because the electrical work was done by the guy next door who is an audio engineer for the local TV station and has a passing interest in model rail-

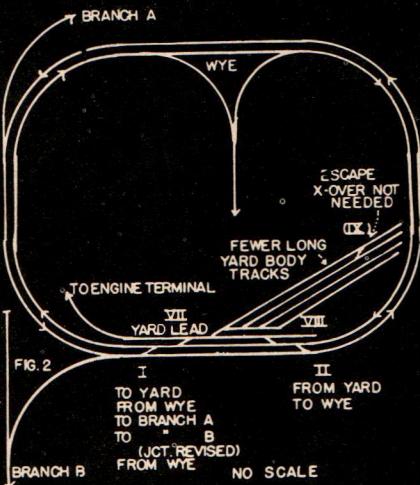


FIG. 2
NO SCALE
MINIMIZING MAIN LINE CROSSOVERS

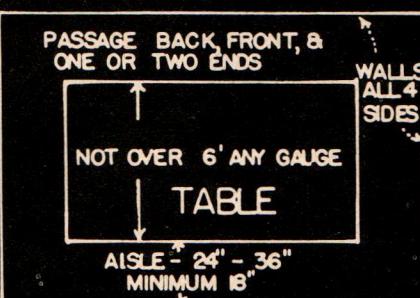


FIG. 3
ISLAND LAYOUT

by the layout doctor

roading. Unfortunately he has been transferred to a station in southern Utah and nobody can quite figure out his circuitry, and now for some unexplained reason the main line won't function.

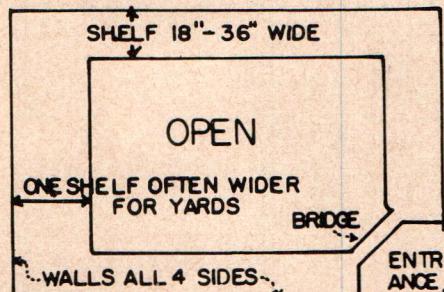


FIG. 4

SHELF LAYOUT

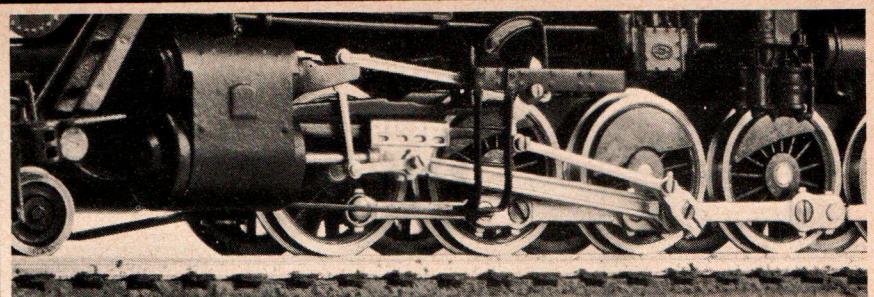
Some newcomers also go whole hog on trackwork, trying to beat the New York Society of Model Engineers for the number of turnouts on their pike. Luckily for the NYSME, they have a whole crew of dedicated members who can track down troubles in any possible errant turnout. The home modeler has to keep tabs on trackwork, wiring, scenery, cars and locos, and a host of other problems. Thus the more elaborate the layout, the more the likelihood of trouble.

There's a *Carstens Law* which says that trouble on a model railroad is most likely to develop when you're trying to impress company. So when company comes, don't try to run strings of freight cars backwards through intricate crossings, and do put all defective cars and locos on the rip track. Or better, attend to dropping couplers, defective trucks, and other repair jobs before showing off the pike. Cars or locos that constantly derail at certain spots should be repaired, not just rerailed.

Steam locomotives are somewhat more delicate than diesels because of their valve gear, wheel arrangements, and tenders. Locos should be checked periodically for loose screws that can cause side rods to drop, trailing trucks to short against fireboxes or frame, loose rims, and similar problems. Best bet is to watch for defects when giving locos their regular greasing and oiling prior to operating sessions.

Layouts can be kept clean by covering with thin polyethylene film, or even old newspapers. Some modelers have found that layouts stay cleaner with air purifiers.

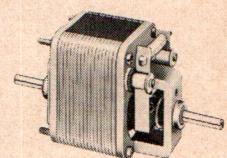
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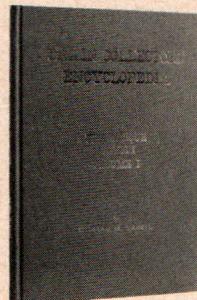
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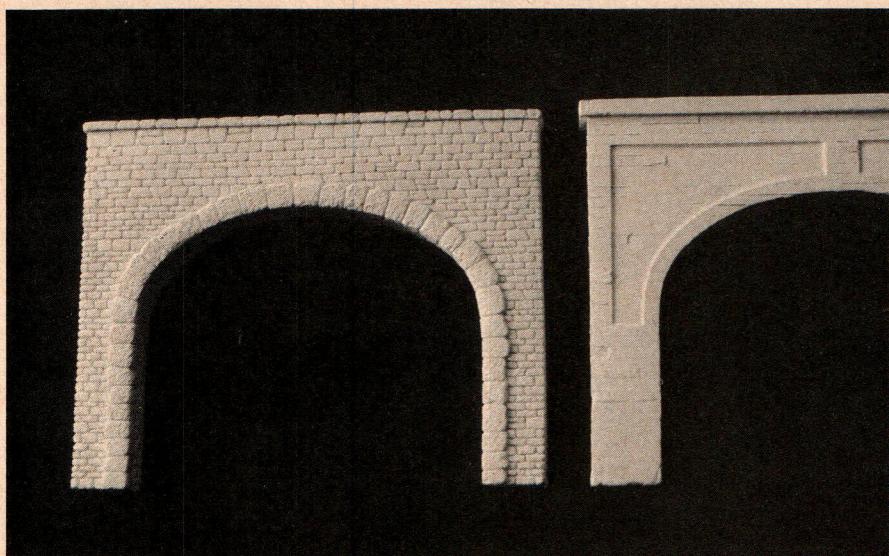
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Tunnel Portals: HO

Mfd. by Campbell Scale Models, P. O. Box 121, Tustin, Calif.

Campbell Scale Models has four plaster-cast tunnel portals in its line, and since construction is essentially the same in all four units, we'll review them all simultaneously. The four portals are: No. 347 Single Track Stone Portal, \$1.35; No. 348 Double Stone Portal, \$1.60; No. 349 Single Track Concrete Portal, \$1.35; and No. 350 Double Track Concrete Portal, \$1.60.

Each portal is white plaster, nicely detailed, packed in foam rubber and an individual carton as protection against breakage. Each portal measures somewhat over 5/8" thick. Bases are flat enough so that the portal can stand alone. To install, the modeler would run his scenery material, plaster or other, up close to the tunnel opening, pressing the portal in place and being sure that the portal is centered on straight track or installed so as to clear the longest possible equipment if on a curve.

Actually, the Campbell portals have been adapted slightly from actual railroad designs so that they can be used on the sharper curves found on model railroad layouts and also provide somewhat larger openings for ease in reaching in when necessary. The opening widths for the tunnels are as follows: 347, 2 3/4"; 348 and 350, 4-11/16", and No. 349, 2-7/8". The height is sufficient to clear cranes, high cube cars, and other oversized equipment, including 00 gauge equipment.

The modeler will have to paint or weather the portals himself. The stone portals came into being as the

railroads became more established, in the period following the Civil War, and concrete portals came in with the Twentieth Century, though there are wooden portals still in use, relatively new, and stone portals that date back far earlier. The stone design should be wash painted to represent stones of the color found in your area: grey, buff, brown, red, etc. Floquil makes a concrete colored paint for the concrete portals. The concrete portals have the wood pouring form detail cast in (detail which we understand is highly desirable in this modern era on actual structures). After painting, all of the portals will need weathering with a grey wash especially along the cracks and seams. A burning candle is used to put a smoke smudge above the center of each portal if your line is steam operated or perhaps operates diesels in need of a valve job!

The Campbell portals are quite delightful and offer a good variety for the layout. Variations in installation and coloring further widen the types. We did not find the slight increase in width opening objectionable, and, if anything, it is a must as track radii get sharper. Instructions for installation are packed with each kit. Overall dimensions of the double track portal is 6 inches wide and 4 1/4 inches high. These are excellent pieces.

D&RGW K-36 Mikado: HO_n3

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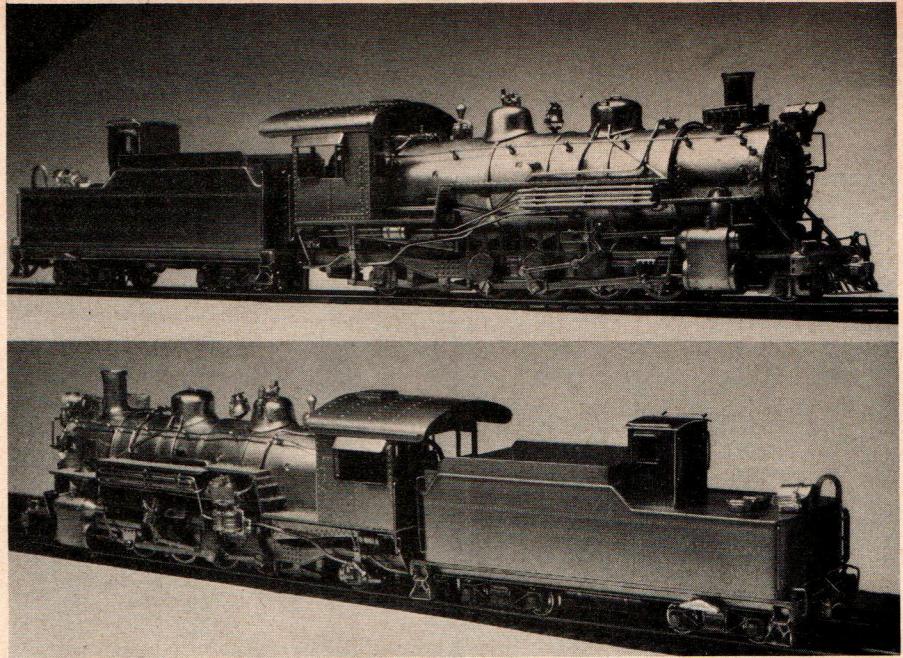
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Two views of the Balboa D&RGW class K-36 Mikado in HO scale, husky and powerful looking despite its narrow gauge. Outside counterbalances, doghouse, loads of piping, and visored headlight all combine to give it lots of class. Prototype series 480-489, 1925.

of the Denver & Rio Grande Western 2-8-2 class K-36, built new as Nos. 480-489 by Baldwin in 1925. Pilgrims to the narrow gauge Mecca in Colorado will find them familiar, since some are still in service, along with similar sisters in neighboring classes.

The sight of the model churning along the slender test track with all the eye-catching motion of the outside counterbalances and valve gear in full working order is enough to make anyone think of converting to narrow gauge.

The model is of brass construction with a number of U. S.-made lost wax castings, as well as coined and formed sheet parts. The underframe has particularly fine detail. Soldering is neat with parts well aligned in assembly.

The sample had no bind in the moving drive parts and ran on the lowest rheostat position without any nudging. On the full 12-volts, the loco waddled along at a realistic

speed of about 50 scale miles per hour, albeit somewhat in excess of the speeds turned out by the prototypes in performance of their daily chores. With proper breaking in and proper lubrication, this should be a beautifully performing model.

All driving wheels are sprung. Drive is via a metal worm and gear. Drivers are 44 inches in diameter. The loco weighs $9\frac{1}{2}$ oz., measures $9\frac{1}{2}$ inches overall, and will go around an 18 inch radius, although we'd recommend somewhat more if possible.

The engine is fitted with three brackets in the smoke box area which are needed for mounting a snow plow which the prototype sported for much of the year. HO scale replicas of these plows are available from Balboa in limited quantity.

It is our understanding that this model was originally planned as a limited run model at a higher price but pre-production orders were so great that the loco became a part of

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 NEXT...

withdraw slightly to disengage couplers

magnetic force draws

coupler off center

THEN... enter again, couplers

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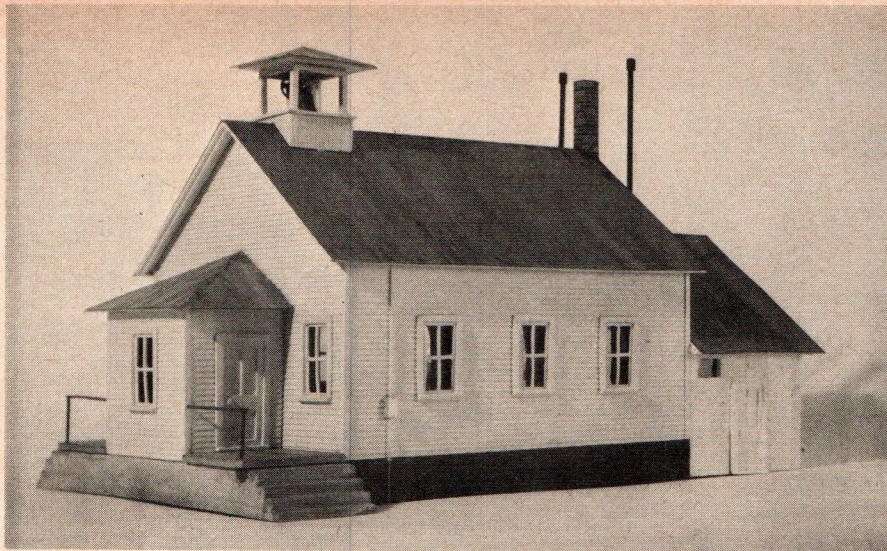
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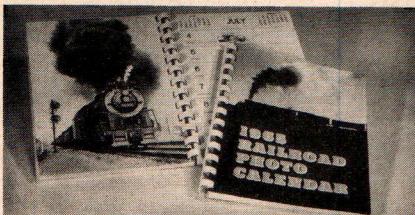
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Included in the kit are die-cut walls including window openings, Northeastern stripwood, die cut card stock for sub roof, die cut bristol for the utility room, castings for doors and windows, cast bell, window acetate, wire, balsa for foundation and chimney, brick paper, and embossed metallic paper roof.

Assembly is not complicated so novices can try this one and not run into too many snags. No special tools are necessary other than those the modeler can be expected to own already. The wood should be sanded before construction starts. We also recommend weathering the roof since one rarely sees a brand-new shiny tin roof. The roof material provided weathers easily with Floquil or other weathering mediums. The tin roof turns light grey in use, and then begins streaking with rust after a short period unless painted.

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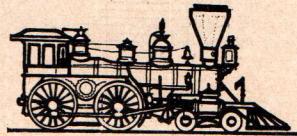
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A collapsed storm sewer and a very heavy rainstorm caused this damage on George Eschbach's Pennsylvania Railroad (Central Div.) 42 inch layout was inundated by 44 inch water level, leaving a sopping layout dripping with mud, twigs, leaves, and debris. Bill Echternach shot the flash photo while the power was off.



TROUBLE SHOOTING

**Conducted by Bill Schopp
& RMC Staff**

Questions for Trouble Shooting are welcome on any model railroad subject. Questions should be brief and to the point. We cannot undertake individual layout design work, nor can we recommend brands of merchandise. We will print those questions deemed of greatest interest to our readers. We will attempt to answer questions by mail when return post cards are included but cannot guarantee to answer all questions: Trouble Shooting, c/o RAILROAD MODEL CRAFTSMAN, 6 East Main St., Ramsey, N. J.

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keep No. 1 moving until it is picking up current again.

It is not easy to uncouple such units, however, since wires must be disconnected—on real engines, jumpers are simply unplugged. "Cow and calf" diesels thus make excellent switching units for a model railroad, which uses insulated or isolated frog switches.

True Scale

E. B.: Are all HO scale models really that: true HO scale?

ANSWER: AH, gentle reader, do fairys really exist? Model railroading in any of the popular home sizes must inevitably result in a compromise. Thus steam loco models are powered with DC electric motors. 0 gauge steam locos often have third rail shoes. HO trolleys often run on 2-rail track. Flanges are oversized and passenger cars are made with 20 ft. sections omitted to permit operation on curves that would make a real railroad man wince.

Just far far you, as a model railroader, will accept compromise will be governed by a wide variety of factors including the space you have available for a layout, your pocket-book, the time you have for scratch-building plus your model building

NOVEMBER, 1966

skill, the work done by your model railroading buddies, and your own ideas on model railroading. Many operators are content with the ruggedness of tinplate equipment. Others demand individually laid wooden ties with four spikes per tie and the widest possible radius curves. Most modelers are found somewhere in the middle, taking the best from both ends.

Gem S-1 on Curves

R. S.: I have a Gem PRR S-1 6-4-4-6 (World's Fair Engine) and would like to be able to run it on my layout which has 26" radius curves, below the minimum required. How can I adjust it to make it take these curves? Also, is it possible to make it rigid frame as was the original?

ANSWER: Making it take 26" curves is work, but it has been done, about as follows: (1) adjust balance of engine so that weight is centered above rear pair of drivers; (2) use fingers and flex skirts outward about 1/16" each side to give more swing to front cylinders; (3) remove wrapper from front cylinders and reshape outside of cylinders above piston to 5/8" radius to allow more room for swinging; (4) remove outside front VG hanger and mount knee shaped link on inboard bearing; (5) attach union link in front VG to valve rod and omit radius rod, which scarcely show anyhow; (6) move front airpumps on frame in as far as possible; (7) replace front airtanks with 3/4 circles of brass tubing around frame, in effect moving them in as far as possible; (8) adjust springing of drivers as well as pony trucks—truck light front drivers lights, rear drivers strong.

If frame is rigidized (not saying how), the extra heavy frame sides could be filed thinner, then buffed, for drivers #2 and #4, giving more sideplay to drivers. Leading and trailing trucks could then be suspended from "booms" (similar to Varney supers, LMB Hudson) that would keep them centered and pulled down with small springs. As far as I know this hasn't been done, but is mainly a suggestion for someone to try; all eight steps listed above could be eliminated.

High Frequency Lighting

R. W.: Whatever happened to high frequency lighting which would let you keep train lights on even when the train stopped?

ANSWER: As far as I know it is not now commercially available. Good ideas often come along that seem like great ideas for making model railroading better but they fail because of various inherent faults: insufficient public response, excessively high cost, difficulty of installation, and excessive maintenance. Thus such good ideas as Astrac, cold steam, and 2D have bitten the dust, at least for the present. We think future signal and wire circuits will make wide use of micro-dots, printed circuits, male and female pre-planned wiring systems,

and some type of sensing devices that will eliminate need for many relays. Meanwhile, keep the lights on in passenger cars by putting C cells in your baggage cars and stringing wires from car to car. A terrific idea Lionel dreamed up back in 1912!

Smoke For Model Locos

L. P.: Can you suggest a way to make smoke come out of a model steam loco?

ANSWER: The Seuthe smoke generator units are available, ready to install. Worst part of the job, in some cases, is drilling through the smokestack. Seuthe units are available from Palmer Distributing, P. O. Box 143, Bronxville, N. Y. 10708, at \$1.98 per unit. Specify 3-14 volts or 6-16 volts. Smoke fluid if 98c per package extra. And mention RMC, please!

Weighting The General

N. D.: How can I add weight to a Tyco General to increase pulling power?

ANSWER: Get some flattened pieces of lead 1/8" thick and replace the bottom retainer plate with one made of this material. Lead may also be shaped to fit in a sort of three-legged trouser effect between the splashes over the running board and between the drivers. Screw or cement in place.

Switcher To Prairie

I. C.: I would appreciate information on how to alter my six wheel switcher, with tender, into a 2-6-2 Prairie type loco using a Kemtron lead truck and a Delta trailing truck.

ANSWER: You would, for most HO switchers, have to elongate the space between the front of the cylinders and the back of the pilot beam to give space for the lead truck wheel to run and to swing in an arc on curves. At the back, you would file or saw up into the frame under the motor for the same purpose, or alternately, narrow the frame on both sides to allow some trailing truck swing. A Delta trailing truck would be much too bulky for a small engine and I'd suggest another 2-wheel "lead" truck. The wheels for both pony trucks would have to be located, and the pivot hole location for each determined, then drilled and tapped. "Stretching" the front of the frame to allow for a lead truck would be hard for a beginner, though not much for an expert if he would bother with it. The tender should be replaced with one minus the slope-back for road service.

Custom Made Locos

R. P.: Where can I get locos and trolleys, custom built to my needs?

ANSWER: Several possibilities if you can't do the job yourself. First try the RMC classified ads under the Custom Building heading. Or check with your local hobby shop, who is often geared for such work or knows of modelers who are capable of good custom work. Some manufacturers also offer their kits in built-up form, lettered to your requirements at reasonable and fair prices. A few smaller

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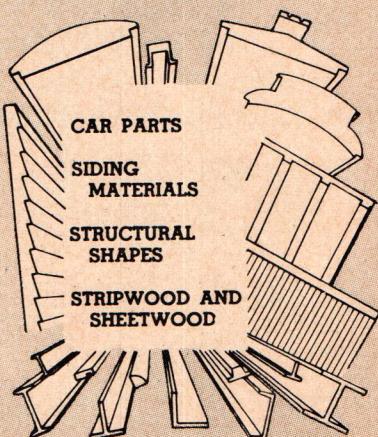


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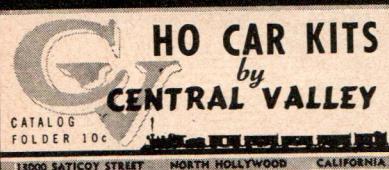


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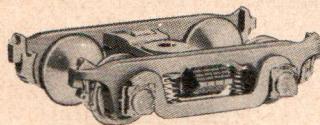
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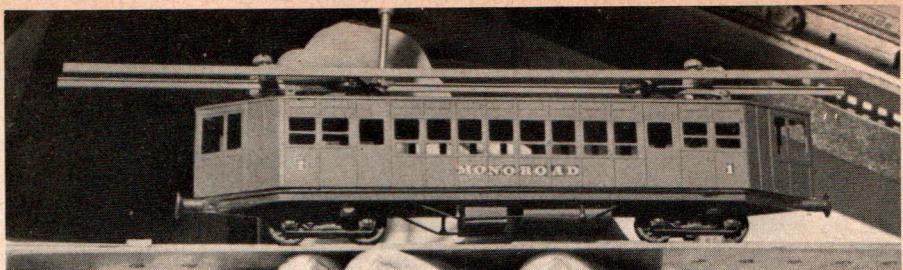
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Trolley Pick-Up Troubles

R. W. L. T. P.: We are building HO trolley lines, one interurban, one city type and we both have the same trouble. Cars will not run around smoothly at any speed without stalling and jerking. We dare not hang overhead wire until the operation has been smoothed out. Several months or refinements have still not gotten us near this point, although running on open track (rather than streets) is fairly good. Any ideas?

ANSWER: I gather you are running your cars now by 2-rail, which means that only 2 wheels are picking up on each car, 2 returning. You will have much better running if you will arrange wiring on one car—for a start—to pick up with the trolley pole and return with the 4 un-insulated wheels. This will give you a sprung pick-up and double the number of wheels returning. You can string a short length of overhead to verify this, or even clip a flexible wire from some high overhead location to the trolley pole. The most successful model trolley lines return with all 8 wheels of a car. I assume that you keep track and wheels clean and that you will occasionally go over the underside of the contact wire with a pipe cleaner dipped in lacquer thinner. The contact surface on the pole or shoe should NOT be solder but silver, copper, or brass.

Snow Modeling

W.K.: In planning a year round model railroad having artificial snow with only the rail heads showing, snow on roof tops, etc., would it be practical to have artificial snow cover the track and then remove same with a rotary or wedge plow? What would I use for snow?

ANSWER: It's possible, yes. Some powdered white plastic would probably be your best bet for artificial snow. Don't use any powder that would absorb moisture. Plastic too finely ground might also suspend it-



self in the air and clog up locomotive gears. We also fear that white snow will quickly look pretty drab when covered with dust, soot, oil burner grime, and other dirt particles. And should go on a rampage.

Moody's Railroad Guides

P. G.: How can I tell when an old railroad in which I am interested was absorbed by another railroad?

ANSWER: Suggest you try your local public library and check their Moody's Investors Guide for Railroads, or a similar publication by Poor's. Such guides are loaded with inside corporate data, routes, histories, etc. Included are lists of railroads giving dates abandoned or merged. Some of the new railroad books on the market often have such data, if they pertain to your particular railroad interest.

Polished Valve Gear

M. M.: Most builders photos show valve gear as being shiny bright whereas I recall valve gear as being duller. Explain.

ANSWER: The valve gear was often shined up for the official photo, for appearance and visibility. Some few engines were operated with shiny valve gear but generally the valve gear was a darker metallic color, such as obtained when rubbed with graphite, which will make the gear work more smoothly at friction points and joints. Ditzgen's Opaque in black works quite well. The use of shiny bright valve gear and locomotive driver tires on models is something of a fetish but it does dress up a model—among those who don't dig weathering.

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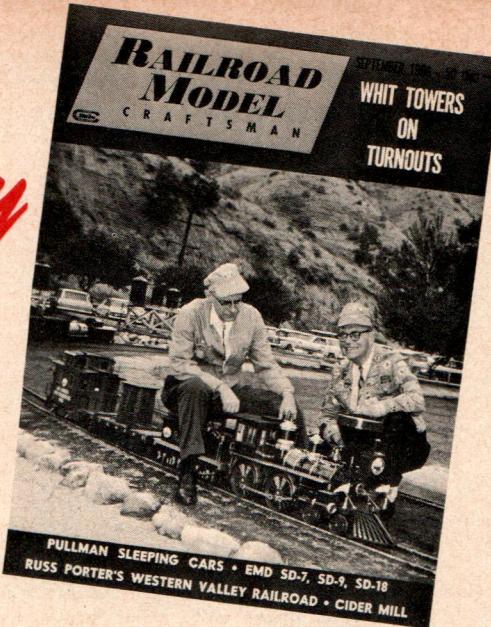
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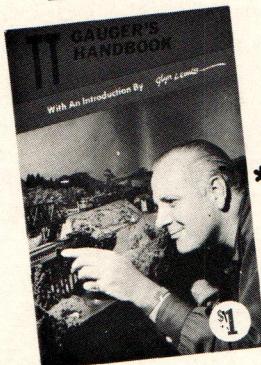
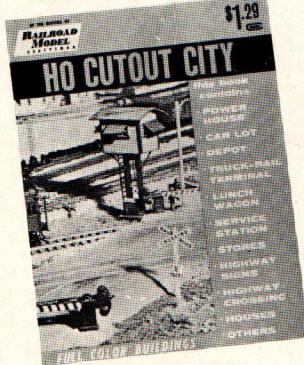
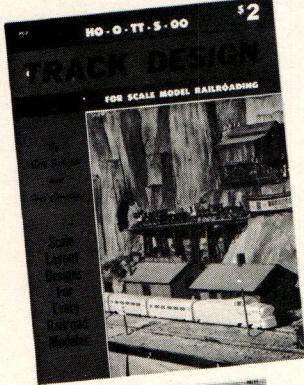
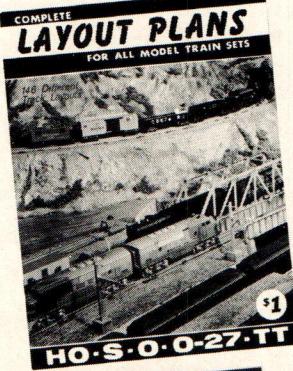
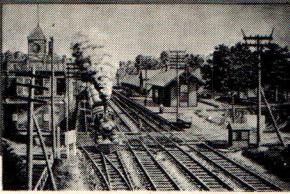
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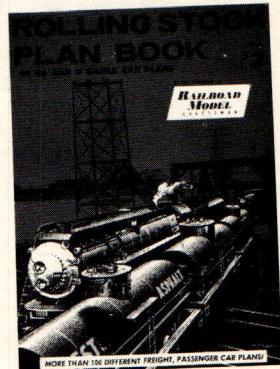
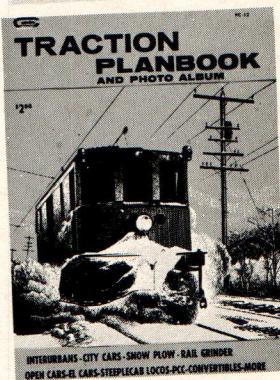
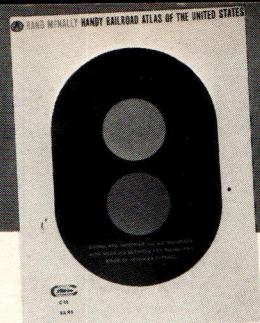
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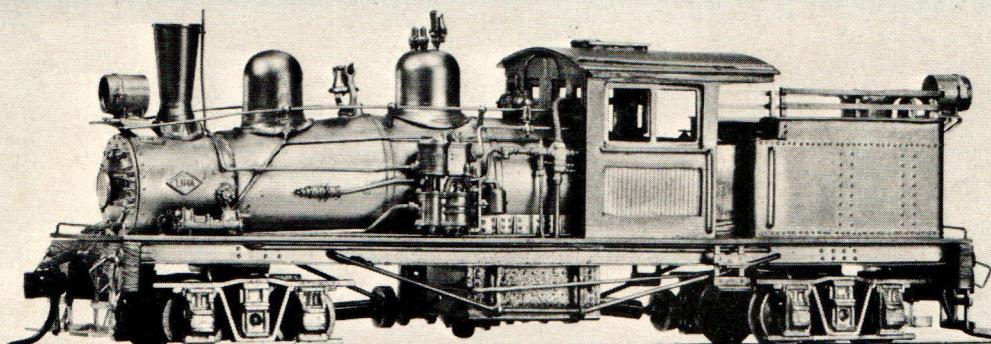
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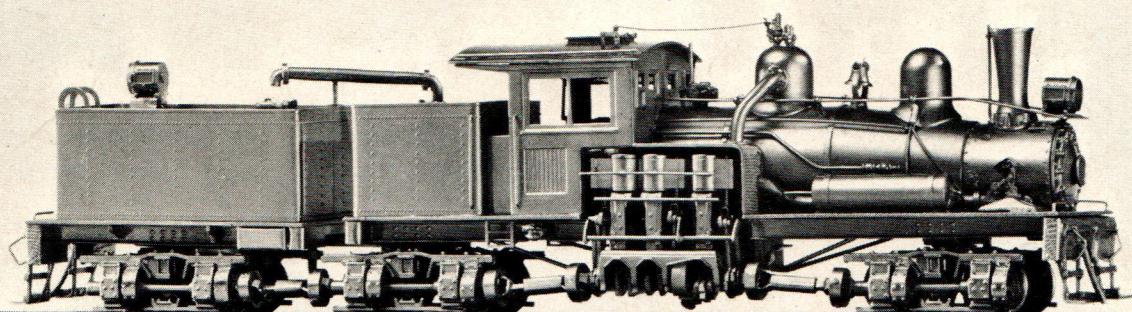
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